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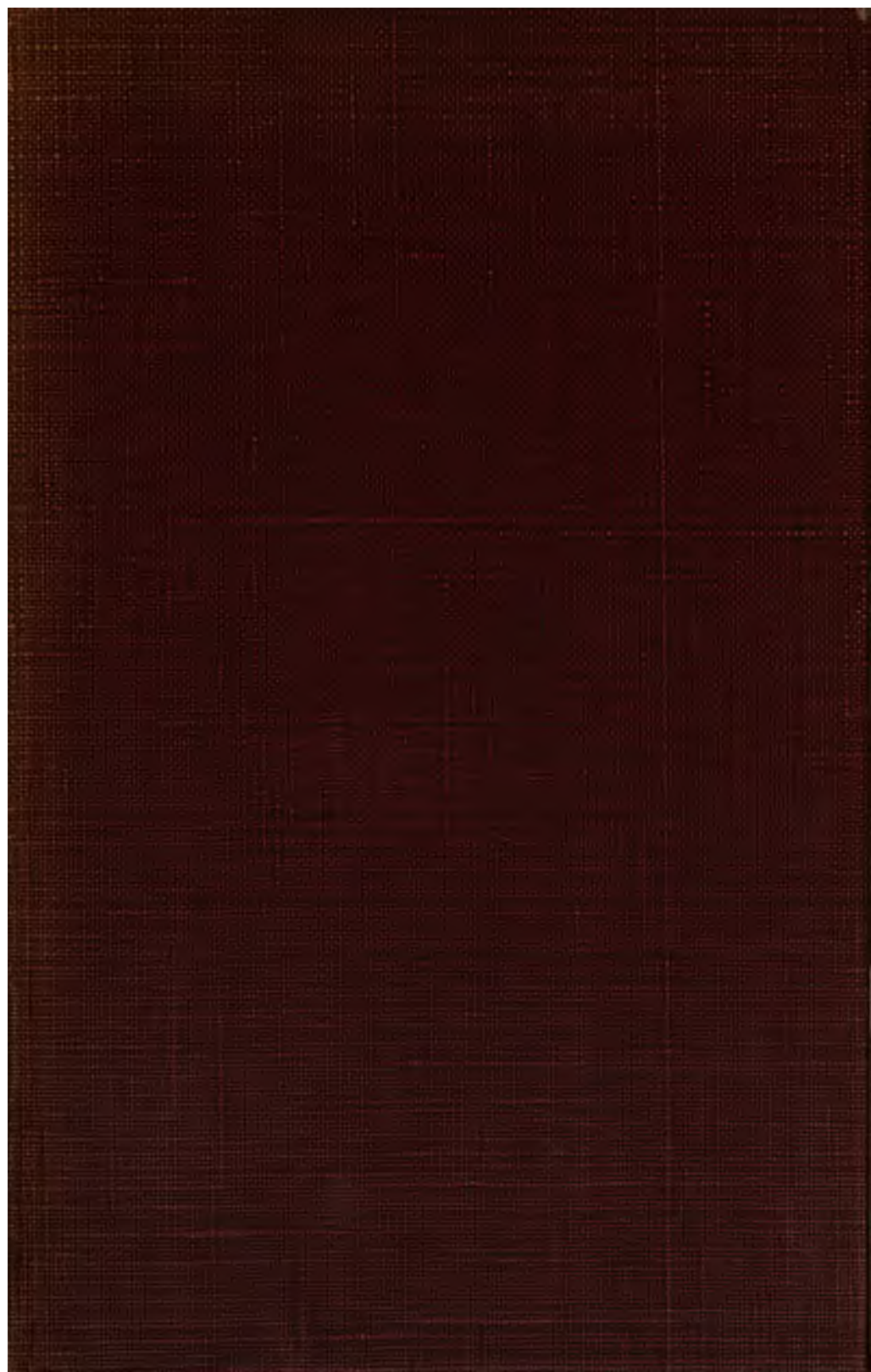
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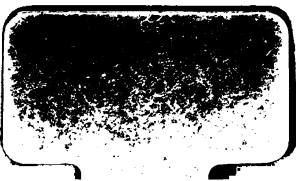
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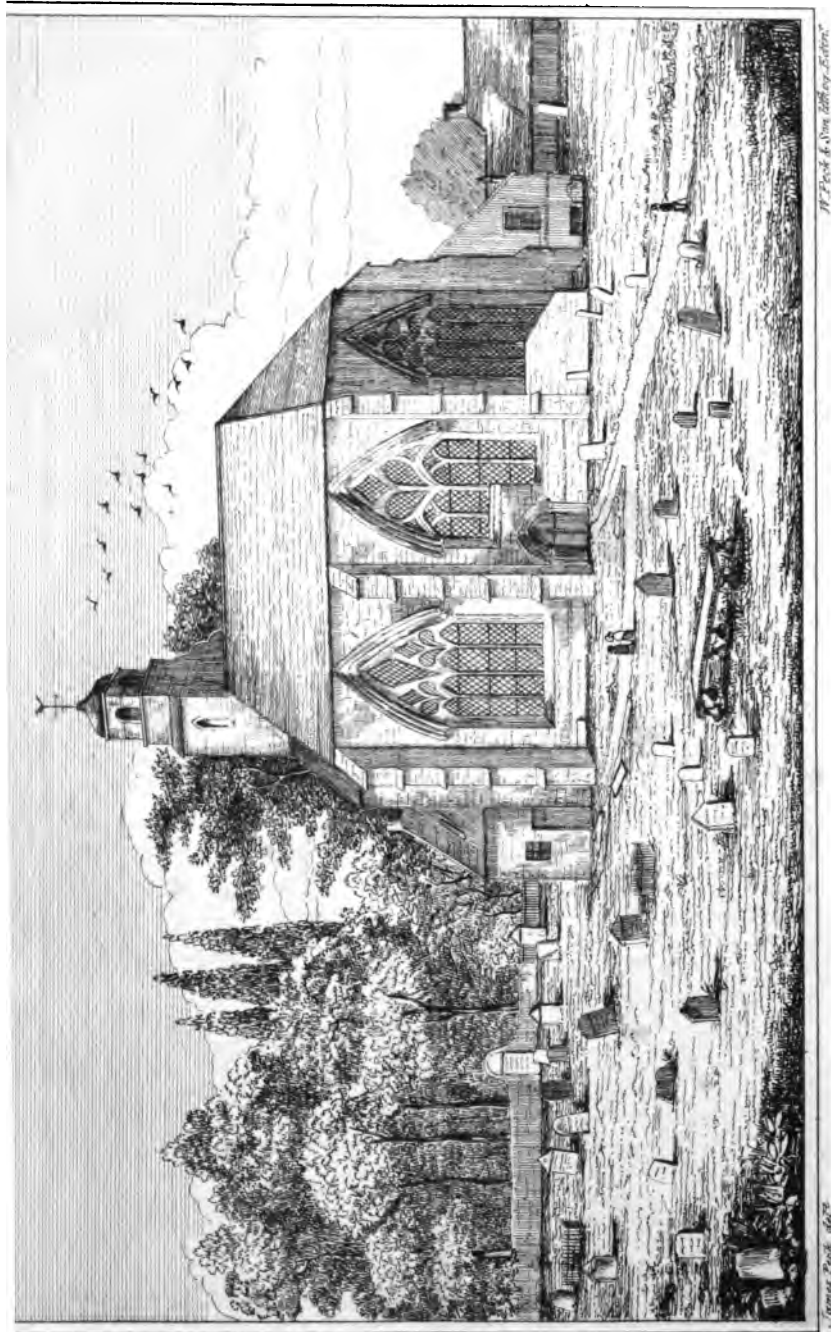




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To John Learmonth Esq.<sup>r</sup> of Dean with best  
wishes from  
The Author



## MID-CALDIER CHURCH.

Lithographed for the Rev. Dr. Sumner, 1838.

ACCOUNT  
OF THE  
PARISH OF MID-CALDER,  
WITH  
MISCELLANEOUS REMARKS,

BY  
JOHN SOMMERS, D.D.,  
MINISTER OF THAT PARISH.

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EDINBURGH:  
Printed for the Author,  
FOR PRIVATE DISTRIBUTION.  
MDCCCXXXVIII.



THE following account of the Parish of Mid-Calder was originally intended to form a portion of the New Statistical Account of Scotland, in the course of publication. But, having offered it, two years ago, to the Editor of that valuable work, the writer was informed that it could not be put to press till after the publication of that of the county town. Since that time, this Account has received so many additions, that the Author cannot expect it can now be admitted to form a part of that publication. He has resolved, therefore, to print only a few copies of it, for the use of his friends and parishioners, leaving it to the Editor of the Statistical Account of Scotland to select from it whatever he may think necessary for his purpose. In the following pages, it will be observed that the Author has generally adhered to the heads of the plan prescribed for the New Statistical Account of Scotland, although he has availed himself of the opportunity of introducing a considerable number of miscellaneous remarks.

MANSE, MID-CALDER,  
*July 1838.*



# PARISH OF MID-CALDER.

PRESBYTERY OF LINLITHGOW, SYNOD OF LoTHIAN AND Tweeddale.

JOHN SOMMERS, D.D., MINISTER.

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## I. GEOGRAPHY.

*Name and Boundaries, &c.*—Calder is a common territorial appellation in Scotland, and always denotes some spot adjacent to water, or rather to a rivulet. This name is of Celtic origin—Cal, Cel, or Coil, being descriptive of wooded or wild regions; and Dur, or Dour, signifying water. These terms are the compounds of the name of several small streams both in Great Britain and Ireland, the banks of which are still covered with natural wood. Chalmers, in his “Caledonia,” mentions four waters or rivulets of this name in South Britain, and six in Scotland, all of which flow into more copious streams. Some etymologists, however, derive the name from the Celtic word *Cadair*, which signifies a meeting or assembly; and, as there is a mound of earth a little to the north of the village, it has been conjectured that this mound was erected for the use of the Bards and Druids, who always held their provincial meetings, civil and religious, in the open air, generally on mounds of earth either natural or artificial. These assemblies, according to the custom of all barbarous nations, were held in some open field capable of containing the vast numbers of persons who had a right to be present. The person who officiated as reciter or crier at these provincial meetings, was called the *Dadgeiniad*; and Dadridge, or Dadridgerig, which is about a mile west of this mound, has therefore been supposed to have been the residence of this officer. This, however, is merely a conjecture.

The parish of Mid-Calder lies in the direction of north and south; and, by the straightest footpath or bridle-road, from the north-east to the south-west extremity of the parish, extends from eleven to twelve miles in length. Its average breadth is from two and a half to three miles; and, in one place, does not extend above three or four hundred yards. It is bounded on the north by the parish of Uphall; on the south, by Linton; on the east, by the united parishes of Kirknewton and East-Calder, together with those of Currie and a small portion of Kirkliston; and, on the west, by the parishes of West-Calder and Livingstone. By a singular coincidence, Liston-Shields, the property of the late Sir Robert Liston, which is situated on the south-east extremity of this parish, belongs to Kirkliston, although it lies at the distance of seven or eight miles from any other part of that parish. The ridge of the Cairn Hills forms the southern boundary of the parish, and may be considered as a continuation of the Pentlands westward till they reach the parish of West-Calder. There are no

elevations in this parish which can properly be called mountains. The easter Cairn Hill is the highest point; and, if Knox's map can be relied upon, its summit is about 1800 feet above the medium level of the sea. This spot commands a most extensive view of the Frith and basin of the Forth, with the adjacent scenery towards Stirling, the coast of Fife, and the Ochils. The eastern extremity of the ridge, or hill, is about fourteen or fifteen miles south-west of the Castle of Edinburgh. Running westward for nearly three miles, it separates the parish of Linton from that of Mid-Calder; and, from the bottom of this ridge the ground slopes, in a gently waving direction northward about nine miles, till it reaches the Almond Water, which may be about 300 feet above the level of the sea. At the eastern extremity of the Cairn Hill which forms the south-east boundary of the parish, south of Harper-rig, there is a hollow slope or declivity, known by the name of the *Caldstane Slap*, through which pass, lies the drove road most commonly frequented by dealers in sheep and cattle between the Scotch and English markets. This road is passable also for travellers on horse-back during the summer months. But, in order to obtain a more easy and direct communication, it is gratifying to learn that our southern neighbours have already formed and nearly completed this road to within a very short distance of the boundary of this parish; and it is to be hoped that the proprietors of the Calder district will find it their interest to imitate their good example, by finishing this line of road as far as this parish extends. In proceeding northward from the Almond, the ground rises for nearly a mile, when it again slopes gently towards Harry's Muir and Pumpherston Mains, which two farms form the north boundary of the parish. Upon the banks of the various streams that intersect the parish from west to east, there are several fertile spots of land, or haughs; but none of these are of such an extent as to deserve the name of a valley.

The village of Mid-Calder is delightfully situated on the south bank of the Almond, near its junction with Linhouse and Murieston Waters. On the east, is the extensive and romantic wood of Calder; and, on the west, is Calder House, which stands on an elevated lawn, surrounded by ornamental walks, and sheltered by lofty trees and numerous plantations. The town is twelve miles west of Edinburgh, twenty from Lanark, and thirty-two from Glasgow. Calder was formerly the name of a district in the western part of the county of Edinburgh, or Mid-Lothian, comprehending the three parishes of Calder Comitis or Mid-Calder, Calder Clere or East-Calder, and that portion which now constitutes the parish of West-Calder. The first of these obtained its name from having been in possession of the Earls of Fife, so early as the twelfth century; and the second, Calder Clere or East-Calder, from one Randolph de Clere, who held a grant of the manor from Malcolm IV. The parish of Calder Clere was united to that of Kirknewton in 1750, and was, at same time, detached from the Presbytery of Linlithgow, and united to the Presbytery of Edinburgh. This extensive parish of Calder Comitis, in 1645, was again divided into those of Mid and West Calder, as appears from our Presbytery records, in which it is stated that, on the 12th of June of that year, Patrick Shields was translated from the parish of Livingstone to West-Calder. This three-fold division of the original parish sufficiently accounts for the scanti-

ness of the teind, and, consequently, for the limited portion of stipend allotted to each of these benefices.

## II. NATURAL HISTORY.

*Meteorology.*—The temperature of the atmosphere varies considerably between the banks of the streams clothed with wood in the lower districts of the parish, and the higher ground upon the cold, boggy land and barren heath. In low, sheltered situations, the thermometer generally ranges between 35 and 60; and the barometer, from 28½ to 30½. In spring and harvest, the frost is often severe in the upper districts when it is scarcely perceptible in places less elevated, especially if the land be drained and wooded, which never fails to raise the temperature two or three degrees. But, although this district, lying nearly as far north as latitude 56, may be supposed naturally cold, it is by no means unfavourable to vegetation, excessive cold and extreme heat being alike unknown. It is more necessary, therefore, to guard against the inconstancy than the severity of the seasons. In low situations, the snow seldom covers the ground to any depth before Christmas, and its continuance is very uncertain. The duration of the storm in winter does not, in general, exceed three or four weeks, although this year it has lasted upwards of seven. In January and February the weather is exceedingly variable; in some seasons it is calm, clear, and open; in others, it is either accompanied with violent wind and rain, or with frost and snow. The mornings and evenings in March and April are generally chill and frosty, and even in May the cold piercing east winds frequently prevail, and are often attended with heavy rain. In June, the mornings are not altogether exempted from the chill cold, which, being speedily succeeded by the noontide heat, often nips the tender shoots of the corn and other crops. The warmest months are July and August; but the otherwise fine weather is frequently interrupted by heavy thunder storms, which are so prevalent at that season. September often runs into extremes. In some years, there is hardly a shower, and, in others, it rains almost daily; but, if September be wet, the weather in October is commonly serene and delightful. November and December have, at intervals, heavy rains and moderate weather; and at all seasons the more elevated districts are most exposed to the severity of the atmospheric changes. Our climate, upon the whole, is moist; and, exclusive of fog and mist, the average number of rainy days for eight years has been ascertained to be about 136. Of rainy days the greatest number is generally in February, July, and December, and the smallest number in March, June, and November; but, during April, May, August, and September, the number is nearly equal. The quantity of rain that falls is generally, but not always, greatest in September, when the showers are very heavy. The highest degree of heat at noon is in the months of June, July, August, and September, and the lowest degree of heat is in December and January. The extreme point of heat to which the thermometer attains is 89 in June; and the lowest, 10 in January, on an average of eight years. These facts are sufficient to enable us to form a pretty correct opinion of the state of the climate in this district; and it may

be still farther judged of, from the operations of the farmer in sowing and reaping his crops. Oats, beans, and pease, are generally sown from the beginning or middle of March, to the end of April; and barley during the months of April and May. Hay harvest commences in July, and other crops from the 25th August to near the end of October. Wheat is commonly sown on summer fallow from the beginning of September to the middle of October; but, after green crop, most generally from the middle of October to the middle of November, on the finest lands.

In spring, and sometimes also at other seasons of the year, the atmosphere is occasionally overloaded by a cold aqueous vapour, or creeping mist, which arises out of the German Ocean, and, spreading westward, first along the valleys, and then gradually ascending to the higher ground, it usually envelopes the whole district in a moist cloud, known here by the name of an *eastern haar*, which commonly lasts for three days, but never passes the summit of the ridge between the Forth and the Clyde. This vapour is sometimes accompanied by a drizzling rain, which is generally succeeded by several days, and sometimes several weeks, of fair weather. It is everywhere known, that the rain is more gentle, and less frequent, in the lower than in the higher districts, and this is particularly the case here during the continuance of the westerly winds; because the clouds are generally attracted by the hills, and shape their course towards the south, by which means there are many showers in the higher districts, when there is not a drop of rain below. Luminous meteors, in a particular state of the atmosphere, are not unusual phenomena. The lunar rainbow is but of rare occurrence, but the solar is very common. Haloes, fire-balls, and luminous arches, are seldom to be seen; but shooting stars, in a clear night about the middle of November, are very frequent. All these, when they do appear, indicate the existence of inflammable air, formed by the great laboratory of nature. When ignited, they consequently produce a change of temperature, by which the floating vapour is thus condensed, and descends in rain. These fire-balls and shooting stars are regarded simply as atmospheric meteors, originating in the inflammation of a quantity of hydrogen gas, and, in consequence of recent observations, they have become greater objects of attention among men of science. The height of some of these shooting stars has been calculated at 500 English miles, and the rate at which they move is supposed to be double that of the earth's motion round the sun. It is very singular that their general direction should be always contrary to that in which the earth moves in its annual orbit. In 1833, those shooting stars, in America, succeeded each other at such short intervals that it was impossible to count them; and the most moderate calculation fixed them at hundreds of thousands. This phenomenon was visible along the whole of the eastern coast of North America, from the Gulf of Mexico to Halifax, from nine in the evening to sunrise. All these meteors came from the same point in the heavens—namely, that of Leo. Those shooting stars observed in the United States appeared on the nights of the 12th and 13th of November. In 1799, similar phenomena appeared in America, Greenland, Germany, and in many other parts of Europe; and also in Asia, they were seen on the nights of the 12th and 13th of November, in 1832. On the 22d April

1803, from one o'clock in the morning till three, the same phenomena were observed in all directions, in such numbers, in Virginia and Massachusetts, as to be compared to a shower of sky rockets. The polar lights, although, of late years, less brilliant and less frequent, are often visible.

*Winds.*—The winds are computed to blow, nearly two-thirds of the year, from the south and north-west. The west wind, coming over a vast ocean, where no land intervenes, is commonly saturated with moisture. That this is the strongest and most violent wind, is evident from the trees, whose tops uniformly incline to the north-east; and they always put out their strongest roots in the opposite direction; so that, when a storm comes from any other quarter than the west, it has been observed that a greater number of trees have been blown down. The winds from easterly points, coming over a narrow sea, are much sharper and less frequent. The easterly winds generally commence about the middle or end of March, and are more or less frequent till about the end of May. Those from the south very seldom blow long without rain, and this rain is generally heavy, but of short duration. During the rest of the year, they commonly blow from the west, with occasional changes, varying from south to north. The tendency of north and east winds is to raise the barometer, while that of the south as constantly is to depress it.

*Prognostics of the Weather.*—The prognostics which arise from a change of atmosphere, must be the same here as everywhere else. When the white, fleecy clouds, or *cumulo stratus*, rise in the western sky, and swell up into large, white columns, they generally precede a thunder storm, or a fall of rain. Large clouds indicate great showers, and, if they decrease, fair weather. Mists in the new moon bring rain in the old, and mists in the old bring rain in the new. In a dark winter night, around this neighbourhood, may frequently be seen a brilliant glare of light, arising from the Wilsontown, Shotts, Airdrie, and Carron Iron Works, which are distant, respectively, ten, sixteen, and twenty miles; and when this light is distinctly visible and very bright, it seldom fails to indicate a fall of rain the following day. The clouds being low and dense, the rays of light are thus powerfully reflected in every direction, and even magnified, by the medium which intervenes. It is said, that a red gleam of light in the eastern sky, before sunrise, presages rain or wind in the course of the day, and that a crimson sky, after the setting sun, is the sure indication of fine weather. Rain also follows the frequent variations of the wind, particularly if it whistles and howls when the doors are shut.

Atmospheric changes are not without their effects upon the *animal creation*. Some persons feel a kind of oppression before thunder, and violent pains, like rheumatism, in their joints and feet, before a violent storm. A change of weather is also prognosticated by cattle and sheep, when they feed diligently, and manifest a reluctance to leave their pasture; by the uneasiness of swine, when they grunt loudly, and retire to their sties; by cats washing their faces, or by scratching at a wall, or by losing their vivacity, and remaining within doors; by the dog, when he exhibits a reluctance to food, and becomes dull and heavy, and seems to be hunting while he lies asleep. Also, by the mole working with unusual alacrity, and by the earth-worms coming

out of the ground, as if they had been compelled to leave their native element.

The *feathered tribes* likewise sensibly feel the influence of these atmospheric changes. Previous to an approaching storm, it is not uncommon to see our domestic fowls rolling themselves in the dust or gravel, or trimming their feathers, and the ducks and geese flying anxiously backwards and forwards in the water, with little intermission. The same change is indicated by pigeons returning slowly to their cots at a late hour; by wild-fowl withdrawing from the sea-coast; by the swallows skimming along the surface of the ground; by the crows flying low, and returning very late in the evening, especially if to-morrow is to be a stormy day; and the same changes are presaged by gnats biting very keenly, and by flies stinging and swarming more than usual, as every one must have occasionally experienced in the evenings of some of the finest summer days.

These changes also produce a wonderful effect upon many kinds of *plants*. Several of the most common and delicate flowers close their leaves, and drop their heads, as if to shelter themselves from the severity of the atmospheric change. If rain be approaching, it has been observed that neither the African marigold, nor the convolvulus, the mountain daisy, nor the trefoil, open their leaves till their strength be renewed by the influence of a drier air or an invigorating sun. Numerous other vegetable productions do the same. Several kinds of water stones, which are found in streams, and in quarries of a porous nature, likewise indicate rain, by imbibing and retaining moisture from the atmosphere. When such stones are used as pavement, they always assume the appearance of damp, or of being newly washed.

The climate here, like that of most other places in Scotland, is subject to frequent changes. In summer, it is dry and airy; and in winter, except during frost, it is cloudy and damp; but, notwithstanding the frequent transitions from heat to cold, and from wet to dry, the inhabitants are not subject to any peculiar diseases. Even the spasmodic cholera, so prevalent some years ago in this country, was here altogether unknown. This dreadful pestilence having prevailed most during the easterly winds, some have been inclined to suppose that the smoke arising from the lime-works, which are situated about two miles to the east of this parish, may have contributed to check the progress of this alarming and fatal epidemic. Residences on limestone soils have also been considered less liable to infectious and epidemic disorders than those of many other situations, as they are generally more elevated and better ventilated, and thus freed from stagnant and unwholesome air. By the absorbing principle of the soil, they are supposed also to be more constantly dry. As a proof of the healthiness of the climate, it is worthy of notice that there are a considerable number of both men and women in this parish above eighty years of age, and one above ninety-three. In the Statistical Account of this parish, published more than forty years ago, the writer, the Rev. Dr Wilson, states, that "he knew a person who, when he lived in a dry country and on the sea-coast, had frequent and severe fits of the ague; but, on coming into the marshy part of this parish, and into a moorish situation, he was soon relieved."

*Hydrography.*—This parish is intersected by three considerable

rivulets, which run from west to east—the Almond, the Murieston, and the Linhouse Waters. On entering this parish on the west, these streams are distant from each other about a mile and a half; but they all meet together at the northern extremity of the village, by the two last mingling their waters with the Almond. In passing through the parish, these streams are increased, in their progress, by many small tributaries, flowing from innumerable springs in the higher grounds. Besides the three waters above mentioned, there is another, which takes its rise in the upper and southern district of the parish, called the Wester-Burn, which, after proceeding eastward, assumes the name of Leith-Head Water, or Water of Leith, intersecting the parish in the same direction from west to east.

The extent and value of mill property situated on the course of this stream, led the proprietors to consider of some means of procuring a more abundant and regular supply of water, for the use of machinery. Accordingly, so far back as the 7th January 1818, the late Michael Linning, Esq., Clerk to the Signet, formerly proprietor of the lands of Colzium and Cairns, perceived the importance and capabilities of this stream and the other springs in this district, and attempted to render them subservient, not only to the increase of the powers of the river, but to the supply of the city of Edinburgh with pure water, at a comparatively cheap rate; and he then submitted his views to a general meeting of the proprietors of lands and mills on the banks of this water.

Again, in the year 1821, he brought this matter under the consideration of the proprietors and tenants of mills upon the water, and shewed them the great advantages that would result from a more copious supply of water, which might easily be obtained by the formation of reservoirs for penning up the flood and surplus water of this stream; for doing which, the natural position of the ground at and near its sources affords peculiar facilities.

By a survey and report of Robert Stevenson, Esq., civil engineer, Edinburgh, in 1821, it appears that a supply of 400 cubic feet of ponded water per minute, for 60 working days of 24 hours, might be obtained by the formation of a reservoir on the lands of East Cairns, which would enable the mill masters, in upwards of 80 corn and other mills on this water, to form a regular system of working throughout the whole year.

In 1825, another survey was made by Sir John Leslie and Professor Jamieson, at the request of the Water of Leith Reservoir Company, and of Mr Linning. Those eminent authorities reported the perpendicular height of the proposed reservoir above the sea, barometrically, to be 884 feet, and estimated the quantity of discharge by the Water of Leith, when full, at 1200 cubic feet every minute; so that the whole force of the descending stream, rightly husbanded, would be equivalent to the action of 106 steam engines of 20 horse power. They also estimated the annual value of the different falls that could be procured along the river, when equalised through the year, by the supplies furnished in the dry seasons from the reservoir, and concluded that they would amount, at least, to £106,000 sterling, and would not merely be advantageous to the proprietors of machinery, but would contribute materially to the wealth of the country, and



would create as great a store of labour as could be produced by the annual expenditure of half a million. The same gentlemen also reported, that the erection of the proposed reservoir would be of real service to the harbour of Leith, since, by equalizing the flood waters, it would detain the greater part of the clay and soft earthy particles which are now carried down and deposited in that harbour.

To realize these hopes, an act of Parliament was obtained, in the year 1825, for providing a greater and more regular supply of water in this river, called the Water of Leith.

In 1829, another survey was made, at Mr Linning's request, by Robert Thom, Esq., civil engineer, Rothesay, with the view of giving a more plentiful supply of pure water to the city of Edinburgh, in connection with the construction of the reservoirs in question. After calculating the quantity of water, from almost innumerable springs, their joint produce was measured; and when collected together into streams, at their exit from this parish, at Harperrig, they amounted to above 400,000 cubic feet of pure water in 24 hours, being a full supply, in the very driest season, for 200,000 inhabitants; and this large supply, he calculated, can be brought to within less than  $2\frac{1}{4}$  miles of Edinburgh, for £33,000. By Mr Stevenson's report, a reservoir containing 44,000,000 cubic feet of water, with the cost of collecting and conveying it to the same place, in a cast-iron pipe, would amount to something above £65,000; but the reservoir proposed by Mr Thom, to contain above 100,000,000 cubic feet of water, to be conveyed by a stone conduit, nearly double the water way of the above cast-iron pipes, he estimated at a trifle more than £33,000. This stream, although comparatively of little or no value near its source, becomes of high importance, both to proprietors and manufacturers, as it advances. It flows in an easterly direction about 16 miles, and, after having exhausted its whole powers in setting in motion a great variety of machinery, empties itself into the Forth, at the harbour of Leith.

In proof of the utility and advantage of increasing the powers of this important stream, it may be stated, that a great majority of the occupiers, extensive paper manufacturers and millers, and several of the owners of mills, including the incorporation of Bakers of Edinburgh, in September 1835, voluntarily came under an obligation to Mr Linning to pay an annual sum of assessment, from £1, to £1:10s. sterling, for each foot of fall occupied by them, on condition of an additional supply of 500 cubic feet of water per minute being found and made good, and which they declared to be adequate to all the exigencies of the machinery at present established on the banks of the river; and, in case of an additional supply being at any future period found necessary, the parties to said obligation became bound to pay for it in like manner and in the same proportions.

In April 1836, Mr Linning again held a meeting with the owners and occupiers of mills, and others, for taking into consideration the improvement of the water and harbour of Leith, and internal resources of the city and county of Edinburgh; on which occasion, the Right Honourable James Spittal, the Lord Provost of Edinburgh, presided; when a resolution was entered into, to the effect that the increase of the powers of this stream might be rendered beneficial and con-

ducive to commerce and manufactures, and was well worthy the consideration and encouragement of the citizens of Edinburgh, and re-appointed the existing committee to consider the best means of accomplishing that desirable object; and from recent surveys, it appears that this important measure has not been finally abandoned.

Although the Almond, and other streams which traverse this parish eastward, contain pure water generally, yet, in time of flood, they are more or less tinged with a dark mossy colour, especially at their entrance into this parish, which is only a small distance from their several sources. The velocity of these streams cannot be easily ascertained, as it must depend much upon the volume of water which they contain at the time. The most considerable fall in any of these streams, cannot exceed ten or twelve feet perpendicular, so that none of them can be justly entitled to the name of a cascade.

*Springs.*—The springs in this parish are very numerous, and many of them consist of pure, soft, and excellent water; but there are others in which the water is so much impregnated with iron, that its quality may be easily distinguished, both by the taste and smell. On being exposed, however, for a few minutes, to the air, these peculiarities can scarcely be perceived. It then becomes agreeable to the taste, and fit for all culinary purposes. In the lands of Colzium there is a mineral spring of excellent water; but, as it never has been analyzed, its qualities and virtues have not, as yet, been ascertained. In the farm of Letham, about a mile north from the village, is a copious spring, strongly impregnated with sulphur, the water of which emits a powerful fetid odour, resembling that of rotten eggs, or the washings of a gun. In all respects it bears a striking similitude to the Harrowgate waters, and has been sometimes used beneficially in cases of scrofula, gravel, and also for the cure of some cutaneous diseases. Many years ago, this valuable well was handsomely built and enclosed by a Dr Lamond, who, at that time, practised as a surgeon in Mid-Calder. In the kitchen of Calder House, may also be seen a remarkable well, constructed of fine polished stone, 93 feet deep, from which, it is said, there is a communication leading to what appears to be a most abundant spring of pure water, called *St Mungo's Well*, about 200 yards distant from its supposed source in the kitchen. This kitchen well has been long covered up, and, when lately examined, contained but little water. It seems to have been used only in troublesome times. On the Linhouse property, at Balgreen, there is also a well copiously supplied with beautiful water. All these springs are perennial, and the general temperature is from 44 to 50. The water which oozes through marshes and many other places, may often be seen bearing on its surface a covering of a lilac or reddish scum, being impregnated by the minerals through which it flows.

*Geology and Mineralogy.*—This parish is intersected by three great public roads—the northern line running between Edinburgh and Glasgow; the middle line between Edinburgh and Ayr; and the southern line between Edinburgh and Lanark, by Carnwath; the two former passing through the village of Mid-Calder. From the Almond northward to the parish of Uphall, the ground has a southern exposure; but from the river to the summit of the Cairn Hills, which form the boundary between this and the parish of Linton,

the aspect of the ground is to the north. The land upon the banks of this river, and all its tributary streams, as may be supposed, is, in general, the most fertile, and some of it consists of a rich, dry, and productive loam; but, on retiring from the banks to a more elevated situation, the ground generally becomes less fertile, and at length terminates in a thin, barren clay, upon a hard, cold, and dark, blue *till* or *shale*. But even this naturally sterile soil has been rendered productive, in some places, by thorough draining, and the liberal application of lime and other kinds of manure. It may be observed, that, in the upper district of the parish, there is a large portion of naturally unproductive land, which, by proper draining, spade-culture, hoeing, and other modern improvements, might be sufficient to support a numerous population. To shew the great improvement of which some portion of these lands is susceptible, it may be mentioned that a feuar, on the edge of the Cairn Moss, a few years ago, by draining, spade-culture, and abundance of manure, raised, on one acre, 10 bolls of oats, several bolls of potatoes, and some cabbages; a crop equal, at least, if not superior, to some even of the best land in the parish.

Abundance of excellent *rock* of various kinds, such as freestone, whinstone, and limestone, have been discovered in different places throughout the parish. Quarries of all these have, at one time or other, been in actual operation. One for road metal is now open, on the estate of Howden, the property of Mrs White. This, however, is intended only for private use. Another on the estate of Linthouse, was in operation not many years ago; and one on the estate of Pumpherston, belonging to the Earl of Buchan, both of which are now used for the public roads. A quarry of excellent limestone has long been, and still continues, open, for the supply of the neighbouring tenantry, on Mr Hog's estate of Easter Muirieston. This limestone has never been found in a regular stratum, but in long beds or nests, or of a round globular form, at short distances from one another. It admits of a beautiful polish, and has been used as marble, both in the country and in Edinburgh. A considerable stratum of excellent limestone, some years ago, was also opened up, in the lands of Colzium, by pits, now the property of the Rev. Dr Laird of Portmoak. A kiln of it was burnt and examined by Dr Fyfe, and was found to be of the best quality; but, being too distant from coal, it afforded no prospect of covering the expenses necessary to render it useful to the community. A freestone quarry has long been in operation in Calder-wood. The stone is fit for all kinds of architecture, being hard and durable, and might be wrought to an unlimited extent. Within these few years, a quarry of unexhaustible freestone was opened, at the bottom of the ridge of the Cairn Hills; and Mr Linning, then proprietor of these lands, made the munificent offer, to the Royal Association of Contributors to the National Monument of Scotland, of as much of this body of excellent white freestone rock as would be sufficient for the completion of this splendid memorial of the great victory of Waterloo, in memory of the gallant officers and men who fell on the ever-memorable 16th and 18th June 1815. In this quarry, blocks of any magnitude may be raised at a moderate expense; and the buildings which have been already erected of this stone, are sufficient to prove that, from its durable nature and beauty, it is eminently fitted for all the purposes of the

most delicate architecture. A lease of this quarry was lately granted for ten years ; and, in consequence of the stone being so easily worked and so cheaply raised, and from having a complete command of the level, it was believed that, under judicious management and active superintendence, it might compete even with some of those that are situated in the more immediate neighbourhood of Edinburgh. The bottom of the Cairns Hill seems to be wholly composed of this stone ; and the extent and thickness of it must be immense. The dip of the strata of all these rocks, is, in general, towards the south. In several places on the banks of the Murieston Water, and particularly on the property of John Keir, Esq., there is a kind of rotten rock, intermixed with a species of crystal, in the cavities of which have been found small portions of bitumen ; but the stone itself is of little value, because, after being exposed for a year or two to the action of the air and frost, it crumbles into dust. No kind of animal remains have hitherto been discovered in any of these rocks ; but several petrifications of the pine tribe have been found in the strata, and small portions also of crystallized quartz. Many excellent specimens of valuable ironstone are almost everywhere to be found in the beds of the rivers ; but the quantity is not sufficient to compensate the expense of carriage, and labour of digging them out of the banks.

A fine specimen of rich lead ore was lately dug up, by Mr Young of Harburn, when sinking for water, in one of his farms in this parish. It was found about 16 feet below the surface. But no attempt has hitherto been made to follow up this discovery, although, since that period, lead ore has been dug up in three other parts of the Harburn estate. A small seam of coal was also found, some years ago, in the upper district of the parish, between Camilty and Crosswoodburn ; and, since that time, several others have been discovered, one of them between three and four feet thick, very near the surface ; and this estate abounds also in limestone and manganese, with many promising appearances of iron. Some excellent specimens of this *valuable* compact, grey oxide of manganese, are at present in the writer's possession. The covering of the rocks is of various kinds. If the rotten rock or whinstone be near the surface, the soil is dry and fertile ; but when deep, it is generally cold and wet. It cannot be said that any of these fields of rock are covered with alluvial deposits, or with transported soil, unless what has been for ages accumulated along the bottom of the Cairn Hills can be considered of this description. In many spots the soil here may be considered as rich ; but, being exposed to so much moisture, and in so elevated a situation, the process of vegetation must necessarily be slow ; and the grasses being of a diminutive growth, although of excellent quality, yield a more scanty supply. The plants most peculiarly attached to the best soils, are the poas, meadow fescue, timothy grass, cocks foot, *dactylus glomerata*, meadow soft grass, or Yorkshire white, *holcus lanatus*. On moist clay and mossy soils, are to be found that very valuable grass brought into notice by Dr Richardson of Ireland, and which has been advantageously cultivated by Mr Young of Harburn and others, in the parish of Mid-Calder, to great extent, and at little expense—the creeping bent grass, or florin, *agrostis stolonifera*. It grows luxuriantly in a wet or spungy soil, unsuitable for other grasses ; and its growth is most vigorous in moist, warm, and sheltered

spots. In favourable seasons, when properly cultivated, it yields from four to five hundred stones per acre of the most nourishing food for cattle and horses; and it is not liable to be injured by the wetness of the season, like common ryegrass hay. The white clover, *trifolium repens*, is another of the natural grasses, which is peculiarly attached to the soils of this district, and is reckoned one of the most valuable pasture grasses which requires no cultivation. In the inferior, stiff soils, which are unfriendly to healthy vegetation, the dock and the common rush universally maintain their hold; but, as soon as the ground is properly drained, and comes under cultivation, they are no longer to be seen.

*Zoology.*—There is no minute animal of any kind peculiar to the soil, unless the horse leech may be considered of this description. It inhabits stagnant waters, and is sometimes found in great abundance in cleaning out the bottom of water ponds. Under this head it may be observed that one or two of the more rare species of animals, which formerly existed in this district, have entirely disappeared. The badger, which, in former times, inhabited the subterraneous retreats of the woody regions of this district, has long since felt the necessity of seeking a quieter and more secure abode, and has been forced to leave his possessions in Calder-Wood, and other neighbouring glens, as a nursery for foxes. The otter, also, has, in like manner, disappeared. In the early period of our history, this animal was an object of sport. This creature has been domesticated; and, being of an amphibious nature, has been taught to catch fish for its keeper. The marten is another of those wild species of animals, that, in early times, frequented the neighbouring woods, and which has long since been compelled to search out for itself a more peaceful retreat. The polecat or fitchet, and the common weasel, although they sometimes visit the poultry-houses in their predatory excursions during the winter evenings, are now also very rare. The destruction of vermin of all kinds upon which they feed, has long become an object of attention to agriculturists; so that the difficulty of procuring food, and the constant annoyance to which they are exposed, from the gamekeepers and sportsmen, may account for the diminution of their numbers. The wild race of cats has now likewise been happily extirpated; and the squirrel, so destructive to the common pine and fir, by devouring the tender bark near the top, is likewise rarely to be seen. The rabbit, also, has entirely disappeared, except in the neighbourhood of Harperrig.

*Live Stock.*—Of late years the landlords and tenants have been more particular than formerly in the choice and breed of all kinds of agricultural stock; and, although this parish is not remarkable for any peculiar breed of animals, yet the size, quality, and value of each, is always an object of consideration in the sale or purchase of stock, whether it be of hogs, sheep, cattle, or horses. The Lanarkshire breed of horses is most esteemed. They are moderate in size, easily maintained, very hardy, powerful, and extremely active. They measure about fifteen hands in height, and are fit for every kind of work; and, although chiefly used for the cart and plough, many of them for ordinary occasions are also used for the saddle. Great attention is now paid, both by landlord and tenants, to improve this stock; and premiums are now given for the best Lanarkshire mares and stallions. The breed of cattle, also, has, of late, become an object of great attention. For milch

cows, the Ayrshire are in most repute for dairy purposes. By some they are considered as too small, in which case the preference is given to the cross between the Ayrshire bull and the native cows of the district. *This stock* is larger, and is supposed to be more hardy than the former, and brings a higher price, when sold in the Edinburgh market for stall feeding, when the cows become too old for the country dairy. A mixture of the Teeswater has also been introduced with seeming advantage, in as far as rearing and feeding are required for the supply of the butcher market. Some farms are in pasture, and are used by the proprietors for grazing Highland cattle. These are commonly purchased at the Falkirk Tryst, in October, or at Hallow Fair in Edinburgh, when lean. During winter, they are housed at night in a shed ; and, during the time of snow, are fed with straw and hay ; and, after feeding luxuriantly during summer, they are fit for the butcher by the end of October or beginning of November.

*Sheep.*—In unfavourable seasons, and in mossy lands which are much exposed, the surest stock is the original black-faced sheep. In high districts, and on coarse land, they are the most hardy, and thrive the best of any ; but on low and sheltered grounds, when early lamb is an object for the market, the Cheviot and South Downs have obtained the preference. In very rich lands, the Leicester is the favourite. It is said that three Leicester sheep are easier fed than two of the black-faced breed, from their tendency to fatten, and their early maturity. The Highland sheep is only growing, whilst the other is fattening. The most profitable breed now, therefore, is from the Cheviot ewes, crossed with the Leicester ram. Some graziers, in ordinary pasture, prefer the cross between the common black-faced ewe and the Leicester ram. To shew the importance of this valuable stock, it may be mentioned that the late Keillor sale of Leicester ewes and rams in England created a great interest and keen competition among the most eminent breeders of that stock, not only in England and the remotest counties in Scotland, but also in Ireland. The best lot of the former brought L.6, on an average, for each ewe, and of the latter L.50 a-piece. The South Downs were generally admitted, by all who attended the sale, to be excellently calculated to supplant the Cheviot ewe for hill pasture. Such was the sensation among the breeders of this stock, that no less than 700 of the elite of British agriculturists, from every corner of the three kingdoms, were computed to be present at the sale. The number of sheep in the upper or moorland part of this parish, may be estimated about 2760.

We have no *lakes* in this parish, but the rivers and streams are well supplied with trout, and a few eels ; the greatest portion of which is generally carried off by idle young men from the surrounding villages. Near Calderhouse is an ornamental piece of water, of considerable extent, well stored with perch, trout, and eels, which are reserved for private use. In the beginning of October, about the time of spawning, after the Lammas flood, salmon trout has sometimes, although very rarely, been found in the Almond.

*Insects.*—We have no insects here, but such as are common in other parts of the country. Those most habitually troublesome and destructive are the caterpillar, the fruit fly, the turnip fly, the grub, the wasp, the gnat or musquito. The caterpillar does not confine its depreda-

tions to the cabbage and cauliflower alone, but often attacks the gooseberry and currant bushes. On all these, they are found in great numbers from June to October. Towards the end of May, they lay their eggs under the leaves, and in a few days the young come forth, and feed till the end of June, when they are at their full growth. They afterwards fix themselves in some sheltered spot, where they remain for a few hours, till the chrysalis becomes perfect ; and, in fourteen days, the fly is on the wing. Those of a later breed, change to chrysalis in September, and remain in that state till the following May. The chrysalis of the gooseberry caterpillar may easily be found after harvest, by turning over and minutely examining the earth near the root of the bush on which it has been fed ; and by carefully removing the earth near the roots to a distance, and putting in fresh earth, the vigour of the plant will be promoted, and the plant will be thus preserved from any further attack during the following year. The most effectual method of clearing away those destructive insects, is to send children to pick them off as soon as they become perceptible. This, at first sight, may seem expensive ; but it has been found to answer not only in preserving large plots of gooseberries from destruction, but even in clearing many acres of field cabbages. Some gardeners get rid of their ravages by smoking them. This is effected, by placing upon some live coal or peat, in a flower-pot, or other convenient vessel, a small piece of tobacco, and putting it under the bush to be smoked. An old table-cloth or carpet is then thrown over the bush, and a bellows used for blowing the peat. In this way, the smoke, which moves upwards, is confined to the bush, and, in the course of a few minutes, the caterpillars fall to the ground, apparently lifeless. As they will soon recover, however, it is necessary to collect them with a hoe, and to destroy them. This should be done in the early stages of the caterpillar, as thereby the injury they would otherwise commit is not only prevented, but the effects of the tobacco smoke is found to act more speedily. If the bush stands upon a single stem, the caterpillars may be struck off the bush ; and if a ring of tar be put round the stem, it will completely obstruct their passage to the leaves and branches.

*Fruit trees* are likewise liable to similar invasions, from an enemy less open, but equally destructive. This insect seldom makes its appearance during the day ; and those, therefore, who wish to wage war against him, must search for him with candle light, even in summer. During the cold easterly winds that generally prevail in spring, this creature takes shelter in the leaves, which contract and shrivel up. As soon as it acquires strength, it comes forth, and devours the leaves and the blossom. Various methods have been used to destroy this insect, but none of these are so effectual as the cure abovementioned. To prevent the ravages of the turnip fly, *papilio napi*, which is another destructive insect, several remedies have been devised. Steeping the seed in water or oil, and mixing it with sulphur or sand, has been found ineffectual. Strewing vegetable ashes, quick-lime, soot, barley chaff, and sprinkling lime-water, tobacco-water, and other liquids, have also been tried in vain. As the appearance and departure of the turnip-fly are for the most part extremely sudden, the plants which come up late often escape their ravages. Hence, radish-seed has been sown along with the turnip, on the supposition that the radish plant is earlier

than the turnip, and is therefore first consumed. Whilst the fly is reared to maturity by the radish, the turnip itself is thus saved. But the success of any of these plans is very problematical.

The grub, *lomax agrestis*, in particular seasons, makes terrible havoc in some even of the richest fields, to which the farmer looked forward with the most sanguine hopes. Oats, after old grass, are the most liable to his attacks. He generally commences his depredations in the month of May. To remedy this evil, rolling the ground during the night has been recommended. Dibbling, or making holes with a row of dibbles, fixed in a piece of wood, has also been tried. The grubs fall into these holes, out of which they are unable to make their escape. The wasp is another insect, which is more troublesome than destructive. These may be destroyed in their hives by sulphur, gunpowder, or boiling water, after sunset.

After mentioning so many insects of a destructive class, it might be considered inexcusable to omit the notice of one of a very different character—namely, the labouring or honey-bee. Forty years ago, several individuals in this parish found their account in keeping a considerable stock of these most industrious and productive insects. The culture of honey, at that time, was a profitable concern; but so great a number of bee-masters having turned their attention to this occupation, the country at last was overstocked with bee-hives, so that, by scarcity of flowers, and bad seasons, their number is now greatly diminished.

*Botany.*—The botany of this parish furnishes little that is peculiarly interesting. Of the rarer plants found here, the following may serve as an example; and the statement having been furnished by Robert Maughan, Esq., of Edinburgh, who is well known as an eminent Botanist, may be relied upon as correct.

List of Plants found in Calder-wood, by R. MAUGHAN, Esq.

*Hypericum pulchrum.*  
*Geranium sylvaticum.*  
*Asperula odorata.*  
*Cnicus heterophyllus.*  
*Myosotis sylvatica.*  
*Millium effusum.*  
*Rubus saxatilis.*  
*Pyrola minor.*  
*Melampyrum sylvaticum.*  
*Luzula sylvatica.*  
*Rubus cæsius.*  
*Ranunculus auricomus.*  
*Equisetum sylvaticum.*  
*Lysimachia Nemorum.*  
*Asplenium Filix femina.*  
*Valeriana officinalis.*

*Aspidium spinulosum.*  
*Viburnum Opulus.*  
*Viola palustris.*  
*Prunus Cerasus.*  
*Trifolium filiforme.*  
*Lotus major.*  
*Habenaria bifolia.*  
*Paris quadrifolia.*  
*Hyacinthus non-scriptus Fl. Alb.*  
*Hypericum hirsutum.*  
 ————— *humifusum.*  
*Allium ursinum.*  
*Campanula latifolia.*  
*Trollius Europeus.*  
*Lister Nidus-Avis.*  
*Rubus Chamæmorus*, in both Cairn-hills.

*The plantations* here consist chiefly of the common fir, larch, spruce, the oak, the beech, the ash, and the elm. Almost all those varieties seem adapted to the soil and climate, and, in general, thrive well. Of these, the larch is the most predominant, and, being quick of growth and very durable, it is very useful for stakes, railing, and even joisting; but, being extremely liable to warp, it is altogether unsuitable



for many other important purposes. Some few plantations here consist exclusively of the Scotch fir; but, in every case of recent planting, there is a large mixture of larch and hardwood. Near Calder House, there are many fine limes and beeches; but the tree that seems to have attained to the largest size, is a plane, which, from age, is now reduced to a mere trunk. In the former Statistical Account of this parish, it is stated that the trunk of this tree was 14 feet high, its circumference at the thickest part, 18 feet, and that the branches extended at least 30 feet on either side. On this tree are two large protuberances, where it is said *the jugs* were formerly fixed. These consisted of two bent pieces of iron, which were padlocked round the neck of the culprit, as a punishment for certain small offences. The use of these, however, has happily been long since discontinued. It appears that the inhabitants, in former times, were accustomed to hold their markets around this tree for the sale of various articles of merchandise, even on Sunday. The age of this plane cannot be exactly ascertained; but it is particularly mentioned in our Session records, December 1617, and as being then of a very considerable size. This same document shews also that the Sabbath, at that time, was not so strictly observed during the whole day, as it has been, and is, at present. "7th December 1617. The first Seassion off the kirk halden be Mr Jo<sup>n</sup> Tonnent now person of Calder. It is statute be the Seassion off the kirk, that na ostler sell aill from the Rynging off the second bell nor nane by meitt or drynk nather efter that tym ilk ane under the pane off xx sh. and so oft as thai feilzie to dowbill the penalty. Item that no cordiner or vther merchand present ony merchandise or schone to be sauld quhill the preiching be endit bot that thai keip all close at the plane tre til that tym and quha contraivenis to pay xx sh. *toties quoties*." From this notice, it would appear, that this tree, now reduced to a trunk, must have occupied its present situation probably upwards of two centuries and a half.

The most extensive tract of woodland in this district, is *Calder-wood*, the property of Lord Torphichen. It lies south-east of Calder House, and is very beautifully situated between the Murieston and Linhouse Waters, the former of which is sometimes called the Fore-wood Water, and the latter the Back-wood Water. It appears to have been originally a copsewood, the outskirts of which have been filled up with forest and other trees. It extends up the banks of the Linhouse Water, above a mile and a half. At the time the underwood is to be cut, which consists chiefly of oak, with a few birch, mountain ash, hazel, &c., it is parcelled out into regular fixed lots, and sold standing, and the purchaser cuts it and carries it away at his own expense. The bark is disposed of by the purchaser to the tanner, and the smaller branches are sometimes used for the purpose of being distilled in close vessels, into a liquid known by the name of Pyrolignous acid, or wood vinegar, into which, if meat or fish be immersed for a few seconds, it will keep for a long time. This liquid is much used in print-fields for fixing the colours, and by curriers, for staining the leather; and the tar is used for painting steam-engines and cast-iron works. The odour of this tar is very offensive. A preparation of this vinegar is also sometimes used for the table. Calder-wood is

supposed at one time to have extended southward nearly 6 or 7 miles, from the following old traditionary rhyme:—

“ Calder-wood was fair to see,  
When it went to Camiltree;  
Calder-wood was fairer still,  
When it went to Crosswood-hill.”

The trees to which the richest soils appear to be most congenial, are the plane-tree *Platanus*, the lime-tree, the ash, the beech, and all the different species of poplars and willows. All these thrive best in a humid loam. There are many oaks also, but none of which have as yet arrived at any great age or perfection. In most situations, the oak will luxuriate while young, and even on a *tilly* clay; but it attains its greatest size in a deep loam, lying on a gravelly or rocky substratum, and, if placed in any inferior chilly soil, it is subject to premature and early decay. The Scotch elm, which is a valuable tree, and also the larch, seem to suit themselves to any soil, and to any situation. On stiff clay, with a retentive bottom, the larch seems to reach its highest perfection, in less than 40 years; but the thinings of it, long before that period, are used for many valuable purposes.

### III. CIVIL HISTORY.

It does not appear that any *history* of this Parish has ever been written, nor are there many historical events of importance, deserving of particular notice. Most, if not all the proprietors in this neighbourhood, have plans and surveys of their own properties; but there is no other survey of this district, excepting one which extends only a very short distance beyond the public road from Edinburgh, to the western boundary of the county, which was executed some years ago by a very accurate surveyor, the late Mr James Flint, at the expense of the late Dr James Hare, of Handaxwood, for his own use, and that of the road trustees, in contemplation of certain improvements. This sketch includes several of the adjacent farms and villages; but, with the exception of this and the county map, it is believed no other is in existence.

*Eminent characters.*—Connected with this parish, both by birth and residence, there are several remarkable characters of illustrious men, which ought not to be overlooked, and, among these, history has handed down to us the names of some of the ancestors of the present noble family of Torphichen.

The first authentic account we have of this ancient family, is in the reign of David II., 1336, when Sir James Sandilands obtained a grant from that monarch, of lands in the County of Peebles, for his lands of Craiglockard and Stenypath, in the County of Edinburgh. He also possessed the lands and barony of Wiston, in Lanarkshire, and in 1346, he obtained a confirmation of the lands of Sandilands and Reidmyre, in Douglasdale, from William, Lord Douglas. Having greatly distinguished himself by his many heroic actions and eminent services, under that illustrious commander, in the war against the

English, he became so great a favourite that he obtained the hand of his sister, Elionora, Countess of Carrick, in marriage. She was only daughter of Archibald Douglas, of Douglas, and relict of Alexander Bruce, Earl of Carrick; and with her he received the barony of West-Calder, in "*liberum maritagium*," to be held by them and their heirs, in like manner as Earl William held the said barony from Duncan, Earl of Fife. In this manner arose the connection of the House of Sandilands with that of Douglas; and, in consequence of this alliance, the Sandilands family came eventually, as heirs-at-law, to quarter the Douglas' arms with their own.

James Sandilands, the fruit of this alliance, being also a person of great merit, received the honour of knighthood from Robert II., who esteemed him so highly that he gave him his own lawful daughter, the Lady Jean, together with a grant of the baronies of Dalzell, Modirvale, and the lands of Erthbisset, Auchtirbanok, and Slaman-anmoor, with other pertinents, which the family gradually lost; but from their predilection to Calder, and this being their principal residence, they are chiefly known under that designation. These facts are sufficiently proved by authentic evidence in the Torphichen charter-chest, which further demonstrates the affluence and consideration of this family in ancient times. Among other documents in the possession of the family, there is one of 1384, whereby King Robert II., who was then at Calder House, attended by his court, remits "*dilecto filio nostro Jacobo de Sandylandis militi, et Johanne sponse sue, filie nostræ karrissimæ, and to their lawful heirs*, in perpetuum, the feudal casualty *pro Castriwarda Baronie de Caldoure*," and by another original document, dated 7th February 1404, James Sandilands, the ancestor of this family, is styled the king's nephew, his mother, the princess Johanna, being the sister of Robert III. The former Sir James, in right of his mother, Elionora, only sister of William, first Earl of Douglas, became heir general of the Douglasses. Between her and her first husband, the Earl of Carrick, there was no surviving issue, so that at the death of the children of the above Earl William without issue, his immediate line became extinct; and, as James Sandilands, by his wife, Elionora, the only sister of Earl William, had a son *James*, this son became heir-at-law, and heir of all the family estates destined to heirs general. The noble family of Torphichen thus became heirs-general, as they still are, of this distinguished House of Douglas, whose arms they have invariably borne in memory of their descent. The arms of Sandilands, together with the chief insignia of Douglas, are repeatedly sculptured in the 15th century, upon the ancient parts of the church of Calder, and, in one instance, with angels for supporters, which likewise marks their connection with the Knights of St John of Jerusalem, as may be seen from inspection of the Great Seal of the Order of the Temple of Jerusalem, as sculptured in 719, on which are angels for supporters. From another original document, it appears, that Isabel, Countess of Marr, who was heir-at-law of the House of Douglas, had obtained possession of the barony of Cavers, with some other lands, but that James Sandilands, by a deed of King Robert III., endeavoured to prevent her from alienating the said barony, which was a very important and valuable portion of the Douglas inheritance; yet, notwithstanding this deed, in

which the king styles him "*dilecto nepoti meo*," and in which the king makes a solemn promise not to permit any part of this land to be alienated, it was rendered ineffectual by the superior power and influence of the Douglasses. Being anxious to secure the great interests thus vested in the Laird of Calder, in respect of the Douglas' succession, they prevailed on Sir James Sandilands to make *renunciation of his birth-right*, which came to be vested in George Douglas, Earl of Angus, who, according to Mr Riddell, a most accurate antiquarian, was the illegitimate son of Margaret, Countess of Marr and Angus. This formal renunciation was sanctioned by the interposition of the King, on the 9th November 1398; and a charter of confirmation was passed to that effect.\*

But what elevated this noble family, and raised them to the peerage, was the acquisition of the great estates of the Knights Hospitalers of St John of Jerusalem, by a younger son, to whom they succeeded as his heir-at-law, he having left no issue to the principal stem. To perceive the steps by which they rose to this eminence, it will be necessary to take a short survey of the two distinguished orders of religious knighthood. Sir James Sandilands, one of the ancestors of this noble family, was the last Grand Master of the Knights Hospitalers, or Knights of St John of Jerusalem, afterwards of Rhodes and of Malta. They were also called Friars Hospitalers, or simply Hospitaliers. Besides these, there was another order of knighthood, the Knights Templars, or Knights of the Holy Sepulchre. The former of these had, for their patron, St John the Baptist, or, as some would have it, St John the charitable patriarch of Alexandria; and the other had, as patroness, the Virgin Mary. The professed object of both these orders was to defend the Christian Faith, relieve the oppressed, to protect pious pilgrims, and to deliver the Holy Land from the possession of the Infidels, when, during these fruitless attempts, upwards of two millions of people actually perished in these most absurd expeditions.

From MSS. in the Torphichen charter-chest, it appears that the order of the Knights Hospitalers was instituted in 1099. Their dress was a black mantle, with a white cross on the left breast. The order of the Templars was instituted about 1119. This order, to distinguish them from the other, adopted a white mantle as their dress, as an emblem of innocence, with a red cross on the breast, as a symbol of willing martyrdom. From being *milites togati*, both orders thus became *milites armati*, and vowed to defend with their swords that religion which they had formerly guarded by their prayers. At first, they became glorious in arms, and then rich in revenues. The Templars, according to the book of Cupar, and also the annals of Scotland, were seated in this country as early as the time of David I., 1153, when they formed a settlement on the South Esk, in Mid-Lothian; but the chief residence of the Hospitaliers was at Torphichen, in Linlithgowshire, and the time of their first settlement is uncertain. The author of the Annals of Scotland has observed, that, at the battle of Falkirk, 12th July 1298, the persons of note that fell that day, "were Brian de Jay, Master of

\* See Riddell's remarks on Scotch Peerage Law, p. 161, 203; also his Tracts, Legal and Historical, p. 223.

the English Templars, and the Prior of Torphichen, in Scotland, a knight of another order of religious soldiery." Although, at first, the Templars consisted only of nine individuals, they afterwards increased, both in wealth and in numbers. As individuals, they retained their vow of poverty; but their vow was but a cozenage of the world. They had rich palaces and revenues, and nineteen thousand manors in Christendom, belonging to their order. Vice, the almost invariable attendant upon luxury, may have corrupted them to a certain extent; but it is more than probable that the avarice of the sovereign Pontiff, and of his coadjuter, Philip the Fair of France, who hated the Templars, was the true cause of their being suppressed. On 5th October 1307, the Knights Templars, throughout the whole of Europe, were seized and imprisoned, and, after being tried for capital crimes, were condemned, and many of them put to death. All their wealth and vast domains were confiscated, and bestowed on the sovereigns in whose dominions they lay, or were given to their rivals, the *Knights of St John of Jerusalem*, afterwards of Malta, and to such persons as were in favour with the sovereign Pontiff. In Germany, England, and Scotland, alone, they were treated with humanity. Thus fell this once powerful and illustrious order of the Knights Templars, who, in virtue of their own sovereignty, when in their full vigour, were subject to no secular power, were freed from all taxes, could witness in their own cause, and whose very houses possessed the right of sanctuary. In Scotland, their estates and revenues were transferred to the *Knights Hospitallers*. In this way, Sir James Sandilands, second son of Sir James Sandilands of Calder, having succeeded Sir Walter Lindsay as preceptor of the order of St John of Jerusalem, in Scotland, in 1538, obtained possession of the vast wealth and revenues belonging to that order. But, although the lands of the Templars were given to their rivals the Hospitallers, they still retained the name of the *terræ templariæ*—the Temple-lands; and, in time, this name was given also to the estates of the Hospitallers. An abstract of the charters, and other papers recorded in the Chartulary of Torphichen, from 1581 to 1596, extending to upwards of 50 quarto pages, was printed at Edinburgh, 1830, by its possessor, the late Mr Robert Hill, W. S., for private circulation. Sir Walter Lindsay kept a regular rental of all the lands, patronages, tithes, feu-duties, &c., belonging to this preceptory; and the last minute of his hand-writing, subjoined to said rental, bears date 26th August 1539; and annexed is a note, in the hand-writing of his immediate successor, Sir James Sandilands, viz.—“This rental is Schir Valter Lyndsea's handewryt, and syn his decease was never alterit, nor lang time afor.” Signed, JAMES SANDILANDS of Torphichen.

It appears that this Sir James had resided for several years at Malta; and, being esteemed as a young man of excellent talent and good education by Sir Walter Lindsay Lord St John, he was elected, by the Grand Prior and his Chapter, to be one of the knights of that ancient military order, and was thus appointed successor to Sir Walter, at whose death he was invested with the title, power, and jurisdiction of *Lord St John of Jerusalem in Scotland*, and in all the rights and revenues belonging to that order. Independent of what the Hospitallers obtained from the estates of the Templars, it appears, from the register of the Great Seal, book 12, No. 51, that James IV. conferred on them

a variety of other grants and privileges, which had been bestowed upon them by former kings. In the above charter, the hospital of Jerusalem, from which the name is derived, is called *Torfichin*; and the head of the order is styled Preceptor of *Torfichin*.

Buchanan mentions this Sir James Sandilands as a person of great prudence and integrity, who had been often employed in matters of the highest importance to the interests both of the Church and State. He mentions, that, in 1532, he was sent to Hermitage Castle to check the incursions of the freebooters; and, in 1558, to the Regent, in the cause of the Reformed religion; that, in 1560, he was sent on an embassy to Mary of Guise; and, some time afterwards, on the same errand to the French Court, where he met with no very gracious reception, and was upbraided by the Cardinal of Lorraine, who accused him of violating his obligations as a knight of a holy order, by consenting to be the bearer of the propositions of heretics, and as a person stirring up an execrable rebellion; and he was, accordingly, dismissed without an answer.

Having, at the time of the Reformation, in 1560, renounced Popery, and abjured the tenets of his order as Master of the Hospitallers in Scotland, he embraced the Protestant religion, and was among the first to receive the sacrament of the Lord's Supper from the hands of John Knox, in the great hall of Calder House, according to the Protestant form. As a necessary consequence of the Reformation, the ecclesiastical rights of the Hospitallers were suppressed; but Sir James having resigned the lordship of St John into the hands of Queen Mary, her Highness was graciously pleased, in consideration of his great merit and services, to grant to him and his heirs, on payment of ten thousand crowns of the sun,\* and 500 merks feu-duty yearly, the whole possessions which had belonged to the *order*, together with the accompanying dignity of a Lord of Parliament. He thus purchased the estates of both orders; and a charter was granted thereto, in which he is specially designated Lord St John, but which title he subsequently exchanged for that of Lord Torphichen. These lands were afterwards erected into the temporal lordship of Torphichen, by a charter under the Great Seal, 24th January 1563. The original charter in his person carries the baronies of Torphichen, Liston, Ballintrod, Thankerton, Denny, Maryculter, &c., with all their superiorities, pre-eminencies, dignities, and offices, possessed "*tanquam preceptores de Torphichen*." By this charter, the family of Sandilands became hereditary Peers of Parliament; but, as the ancient honour was never *personal*, but had been attached to the *fief* by immemorial usage, like the earldom of Arundel in England, which is vested in the inheritance of the Castle and Lordship of Arundel; so the title of Torphichen thus became a *terri-*

\* At the time of the Reformation, 20 crowns of the sun were equal to £26 : 8s. Scots. This appears from the treasurer's accounts of the town of Edinburgh for 1559-60, when the following entry occurs:—20th September, ane precept to pay to Robert Watson 20 crowns of the soun, to be deliverit to him, to Jhone Willochis, 26lb. 13s. 4d. The writer has to thank the Rev. Dr Lee for this extract and explanation; and he further states, that a pound Scots was, at that time, nominally about one-fourth of the value of a pound sterling; but, in Scotland, a pound Scots would purchase as large a quantity of the necessaries of life as a pound sterling would do in England.

*torial honour*, declared, by an act of Charles I., to subaist in the *mean portion of the message of the Lordship and Barony of Torphichen*. The Barony, in this manner, carries the Peerage along with it; and the remainder of this property has, therefore, still been retained by this noble family. According to Mr Riddell, the author already referred to, from whose researches several of these facts respecting this family have been selected, this Barony, by the charter of 1563, is destined to heirs and assigns; and, in the event of that succession opening to a female, that female would be *Baroness of Torphichen*. From Spottiswood's "Religious Houses," under the article Torphichen, it appears that the Provincial Grand Master of the order of the Hospitallers in Scotland was a title of high honour. With us he bore the dignity of Prior, Master, or Preceptor of Torphichen, or Lord of St John. In England, the Prior, or head of the Hospitallers, sat in Parliament as Premier Baron; and the *Prior* in Scotland, as head of these orders, and in right of his *Barony of Torphichen*, in Linlithgowshire, the original seat and patrimony of the knights in Scotland, sat in Parliament alternately among the territorial barons and dignified clergy. In 1489, Lord St John held the place of Premier Baron immediately after the Earls; and, in 1526, he is classed among the Abbots and Friars as a dignitary of the church. In the decret of ranking of the nobility, 1606, he is placed next to the Lord Boyd.

To enable us to form some idea of the manners of that age, and of the respectability of this family, it may be mentioned, that, in the *Analecta Scotica*, a work illustrative of the history of Scotland, lately published from original MSS., there is an act of the Barony Court of *Calder Comitiss*, relative to the Wappinschaws, &c., of date the 19th April 1586. This act illustrates both the distinguished rank and opulence of this noble family at that period, and the usages of those times, as the Wappinschaws was an exhibition of arms, according to the rank of the person, which, by act of Parliament 1425, was ordered to be made four times yearly in every district. "It was accordingly statute and ordained, by the Tutor and Bailie of *Calder Comitiss*, that all the men of the said Barony, sufficiently provided with horse, armour, and servants, attend the Laird and his Tutor in quhatsumevir *oistis or raids*, to be ready to follow the fray as at any time it shall happen, conform to the act made thereanent, and to make their musteris upon the hill of Calder, at ten hours before noon, under the pain of ten pundis to be taken of ilk ane that falzies, and that none of the Barony take upon hand to have or use any borrowit geir at sadis musturis and wappinschawing, under the pain foresaid, and escheiting of the said borrowed geir." Then follows a list of tenants, most of whom are to have horses worth a specified value, and to be armed with "jak speir and steilbonet, plait sleevis, sword and pistolet." The tacksmen on foot are to have "ilk ane a steilbonet, a pair of plait sleeves, and a bandit staff or speir." It is a singular coincidence, that John Ker, the tenant in Camilty in 1836, is of the same name with his predecessor, who was tenant in 1536, exactly 300 years before.

Another person of distinguished merit connected with this parish, was Mr John Spottiswood, parson of *Calder-Comitiss*, or Mid-Calder, and one of the superintendents of the church, an office which was not intended to be permanent, but designed merely as a temporary expe-

dient to assist in the planting of new churches, in consequence of the great scarcity of Presbyterian ministers, for the supply of new erections and vacant charges. This was a very laborious duty, superintendents being required to preach thrice every week, and to remain in no place more than twenty days, till they had passed through the whole bounds of their visitation. Mr Spottiswood is represented as a pious and learned man, and possessed of singular endowments. Being a descendant of the lairds of Spottiswood in the Merse, he was the chief of that ancient family. His father's name was William. He was distinguished for his military prowess, and fell at the battle of Flodden Field. He himself was educated at the college of Glasgow, and was designed for the Church. During his residence in England, he became familiarly acquainted with Archbishop Cranmer, who confirmed him in his resolution of adhering to the study of theology. Having returned to his own country, he obtained an introduction, through the Earl of Glencairn, to Mathew Earl of Lennox, who afterwards employed him on a mission to Henry VIII. of England; and, on his return to Scotland, being known to Sir James Sandilands of Calder, at that time a person of great authority, he was prevailed on to accept of the parsonage of Calder, which, at the beginning of the Reformation, was then void. In 1560, he was appointed superintendent of Lothian, Merse, and Teviotdale, the duties of which office he discharged during a period of twenty years. In reality he exercised the powers and fulfilled the duties of a bishop, merely under a different name; for it was not so much the office as the name to which the first Reformers felt an aversion; and in the discharge of this sacred function he continued, with the approbation of all good men, till the time of his death, although his parishioners frequently complained in vain that they were deprived of their pastor. The emoluments annexed to the office of superintendent were very considerable, although, perhaps, not greater, or even so great, as the trouble and responsibility of the situation required. In 1568, he had under his superintendence Stirlingshire on this side of the Forth, Linlithgow, Haddington, Edinburgh, and Berwick. As stipend, he received two chalders wheat, four chalders bear, one chalders meal, three chalders oats, and 500 merks. In 1570, the stipend of Calder-Comitis, or Mid-Calder, yielded him, as minister or parson, the third of the parsonage, extending to £68:8:5, two bolls bear, and ten bolls oats; and for Calder-Clere eleven merks.\*

Another still more *eminent individual* connected with this parish, was John Spottiswoode, afterwards Archbishop of St Andrew's, the superintendent's son. He was a native of this parish, and was born in 1565; and, in 1585, he succeeded his father as minister of Calder-Comitis, having been employed as his father's assistant when he was only eighteen years of age. In 1601, he attended the Duke of Lennox as his chaplain on an embassy to the court of Henry IV. of France; and, on the succession of James VI. to the crown of England, he was called to his service; and James Beaton, Archbishop of Glasgow, dying, his Majesty not only preferred him to that *See*, but, on account of his great prudence and distinguished talents in civil matters, he admitted him to be one of his Privy Council in Scotland; and in this capacity he was sent to England, and appointed almoner to Queen Anne.

\* See King's Household. 1568.



At the time of his instaument to the office of Archbishop of Glasgow, the revenue of that high office did not exceed £100 sterling per annum. In 1605, he was advanced to the metropolitan *See* of St Andrew's, and thus became primate of all Scotland. In using his best endeavours to recover some portions of the church's patrimony, he is said to have made nearly fifty journeys from Scotland to London. With James I. he was in great favour, and he was the person who crowned Charles I., as King of Scotland, in the abbey church of Holyrood. In 1635, he was promoted to the office of chancellor; but, in consequence of the civil war, he was soon after obliged to retire to England, where, after a short time of grief and trouble, he expired in 1639. Before he expired, he made a confession of his faith of the apostle's creed; and, touching the government of the church, he considered Episcopacy the only right and apostolic form—parity among ministers being a breeder of confusion.

He compiled an excellent history of the Church of Scotland, in which there is much curious and interesting matter, from the year 1203 to the termination of the reign of James VI. The parsonage house in which he and his father resided, stood upon a beautiful bank between Calder-wood and the village, and has not long since been removed, in order to extend the ornamental grounds about Calder House, the seat of the present noble family. Till within these few years, a part of the ancient furniture remained; and Mr Spottiswood of Spottiswood, solicitor in London, not long since, by means of the present incumbent, received a mirror which formerly belonged to his illustrious relative, probably when parson of Calder. On the family table of Alexander Forbes, Esq., a late proprietor in this parish, the writer, a few months ago, saw a very beautiful damask tablecloth which formerly belonged to the daughter of the Archbishop, and, most probably, at one period had also belonged to the Archbishop himself. The tablecloth was in a high state of preservation, and of curious workmanship. The figures upon it represented a spacious bay, with boats or ships in front of numerous buildings, which were probably intended as a representation of the bay, together with the town and University of St Andrew's.

Our *parish records* are silent as to the person who succeeded the superintendent and his son in this Cure; but from the Synod and Session records it appears that Mr William Burnet was minister here in 1691. He was succeeded by Mr John Lookup in January 1698. Mr Lookup is said to have been a person of very diminutive and slender stature; and one of his brethren, being a person of great bulk and majestic appearance, whose name was also John, used to draw rather invidious comparisons between them, both for his own amusement and that of his brethren, remarking the difference between little John who looked up, and bulky John who looked down. On which Mr Lookup made the following rather sharp and sarcastic reply, which, for some time, put big John to silence, and completely turned the tables against him:—

“Ego, Johannes Lukupens,  
Qnamvis parvus non pigmeus  
Orationem hanc concludo,  
Virtus non est magnitudo.”

Mr Lookup seems to have been a person of very respectable talents,

and of no inconsiderable literary attainments. In the possession of the writer there is at present a small M.S. volume by Mr Lookup, containing notes of several sermons, and both the penmanship and the matter are sufficient to shew that he has been a person of superior education and distinguished abilities. The volume contains what he calls "*Memorabiles temporum circumstantiæ, ac accidentia, quædam nolanda, A Johanne Lukup notata.*" In these notes are recorded many remarks on the great public events that occurred from the time of Charles II., 1684, to the accession of George I., 1714, and on the rebellion in 1715, together with observations on the seasons, and on the state of the weather, and its effects on the produce of the land. The Latin is purely classical, and the penmanship exhibits a beautiful specimen of the writing of that age. In 1693, he attended the prelections in Geometry of James Gregory, Professor of Mathematics in Edinburgh, the brother and successor of the celebrated David Gregory, Civilian Professor of Astronomy in Oxford, who was appointed to that chair through the influence of Sir Isaac Newton. Mr James Watson was admitted in 1759; and Dr Dobie, afterwards minister of Linlithgow, succeeded him in 1773. Being promoted to the cure of the parish of Linlithgow, he was succeeded by Dr Wilson in 1792. In 1793, Dr Wilson was translated to the parish of Falkirk. In 1795, the present incumbent was admitted to the office of minister in this parish. Since the days of Archbishop Spottiswood, none of the ministers of this parish have ventured to come before the public as an author, except Dr Wilson, who published a history of Egypt, unless the present incumbent can be considered in this light, from having written a few articles in the "*Encyclopædia Edinensis,*" and from having, at the same time, been obliged to become the editor of the last three volumes of that work.

Lord Torphichen is the principal heritor, and the undoubted patron of the church and parish of Mid-Calder. The rental of the parish, in Scots money, is as under; and those who pay stipend to the minister, are in the following order:—

		Scots.	s.	d.
Lord Torphichen, for	Barony of Calder,	£2466	5	10
Mrs Hay Primrose,	Linhouse, now Burnbrae,	557	2	11
Earl of Buchan,	Pumphreston,	406	13	4
William Bruce, Esq.,	Alderstone,	364	0	0
Alexander Young, Esq.,	Camilty,	230	18	6
Heirs of Thomas Hardy, Esq.,	Charlesfield,	162	0	0
James M. Hog, Esq.,	Murieston,	141	11	0
Robert Downie, Esq.,	East Cairns and East Colzium,	138	10	0
John Keir, Esq.,	Westfield and Wester Murieston,	151	8	7
Earl of Rosebery,	Alderstone Mains,	102	6	8
Archibald Bruce, Esq.,	Bankton,	102	5	3
Mrs White,	Howden,	87	10	0
Rev. Dr Laird,	West Cairns and West Colzium,	81	0	0
Earl of Morton,	Harperrig,	86	0	0
John Graham,	Wester Causeyend,	29	10	0
William Auld, Esq.,	Howden Park,	22	10	0
Miss Horsburgh,	New Park,	17	6	6
John Davie Martin, Esq.,	Part of Charlesfield,	12	0	0
Robert Bauchop, Esq.,	Muirhouses,	8	11	5

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£5437 10 0

The present rental, including the feus, is about L.7000; and several of the properties have doubled, and some have trebled, the rental, in pounds sterling, corresponding to the original valuation in Scots money.

Besides these, there are several other small properties, which pay a trifling portion of stipend, but are subject to no other public burdens—such as the lands of Killendean and Blackmyre, belonging to Mr Martin; the lands of Calderbank, the property of Miss Mowbray; and those of Muirhouses, belonging to Mr Robert Bauchop; and, on the other hand, the proprietor of Howden pays stipend to the minister of West Calder.

The parochial register, containing the dates of baptisms and marriages, with the contributions and disbursements for the poor, and all the other acts of the Kirk Session, commences 27th July 1604; but in several places it is imperfect, to 8th November 1691. From that period to the present the record is more distinct, and in a more perfect state of preservation, and contains, for many years, not only the acts and church discipline exercised in the session, but likewise an account of certificates either granted or received by the session from individuals who came to reside in the parish. These registers, for the first 100 years, are rather in a dilapidated state, and the pages, in several places, have been misplaced by the binder; but, after that period, down to the present date, the whole of the books of church discipline and Deaconry, and the register of births and marriages, are in a state of good preservation. It is much to be regretted that there is no separate register of deaths and burials. Till within these few years, the registration of the mortcloths used at funerals, might be considered as a sufficiently accurate record of the deaths of persons who were buried in the parish; but of late, a strong feeling has been manifested by the lower classes of the people, in this and the neighbouring parishes, to abolish the use of the mortcloths, originating in an impression that the poor are chiefly maintained by their contributions for mortcloths and other dues, and by various collections, from many of which their more opulent neighbours are altogether exempted, in consequence of non-residence and their frequent absence from the parish. The want of a proper register of deaths and burials is also much to be regretted, both in a historical point of view and as it regards political economy.

In our earliest records, there are some curious specimens of Church discipline. From the few following extracts, it will appear that the exercise of discipline was much stricter and much more efficacious than what is now practised, or would be submitted to in the present times. To the laxity of our Church discipline must be ascribed many of those offences committed against the peace of society, arising from idleness, drunkenness, and other kinds of dissipation. If such persons were excluded from the employment and society of the more respectable inhabitants, they would soon feel the necessity of adopting a better course. The following may serve as a specimen of the discipline of our early Church:—

“13th September [1634.]—Jhone Pottar, as he was injoynit the Sabbath day befor, befor the rynging of the third bell, bair heidit, upon his bair kneis, cravit Jhone Muirheid forgevines at the queir doore as he was injoynit, and the said John Muirheid forgave and tuik him up be the hand.

“7th September [1641.]—It was ordanit be the Sessioun that nane within this paroch schould resave Robert Gothra, sklaitter, and his wyf, in ther houssis heirefter, being deboschit prophane folkis, wnder the paine of fyve pund *toties quoties*.

“22d Februar [1644.]—The Sessioun ordanis James Cranstoun, being

personally present; to stand in the quhyt scheitis the nixt Sabbath day at the kirk dore, and efter sermon to cum publicitlie befeir the pulpit for his approvin (proved) drukennes, and staying from his awin hous, and of his awin consent actit himselff not to commit the lyk wnder the paine of fyve pundis *toties quoties*, and subscribe this act." This seems equivalent to the solemn promise of those who are members of the Temperance Society.

"2d Junii[1644.]—Ordanes the ballie to lay James Inglis Creilmane in the stox, for his malicious speiches and disobedience to the Sessioun.

"11th November[1647.]—Ordainis heirefter, that the Sabbath day, twa of the elderis, in tyme of preaching, search the wholle ostlar houssis in Calder for drinkeris, or other abuissis."

Such ecclesiastical punishments appear to have been necessary in these olden times, and, although they might not be submitted to in the present age, would nevertheless, if put in execution, be attended with the most beneficial effects, both to the individuals themselves, and to the community in general. Punishments, both ecclesiastical and civil, in these times, were more severe and more summary than at present. In Lord Fountainhall's decisions, near the same period, 28th March 1685, two young men having committed a fraud respecting a bond of L.80 Scots, the Lords imprisoned them both, and ordained them to be carried to the Trone on the 3d April, being a market-day, at eleven o'clock, and both their lugs to be nailed to it, to stand there till twelve, with a paper on their breasts, bearing their cheatry, falsehood, and unfaithfulness in their trust; and one of them to return to prison, to lie till he pay the debt.

In 1818, the present writer, after some correspondence with the ministers of the now *United Associate* Congregations of Mid and East Calder, proposed a meeting of the members of their Sessions and the members of the Kirk-Session, with the view of considering the practicability of a union between them and the members of the Established Church. The ministers and elders of these Sessions accordingly met in the schoolhouse of Mid-Calder, on the 25th December 1818. After prayers, the Rev. Dr S. proceeded to state the object of the meeting—that, as Christians of various denominations have at this present time manifested an unusual desire to relinquish all past differences, to practise mutual forbearance, and to unite together in the bond of peace and unity, they could not fail to perceive that it would be equally desirable for them to endeavour to unite two other denominations of Christians, who had been long divided.—That, in attending this meeting, they must consider themselves like two friends who had been in a state of variance, and who had buried in oblivion all past disputes, and the causes which had occasioned their differences, and had at length come together to renew and strengthen their friendship, after a long and painful separation. He reminded them of the reasonableness and advantage of such a union—that to such as seriously reflect on the subject, there could be no just ground for either party to exclude from brotherly love and communion any of those against whom no error or defection had hitherto been charged, as if they had been disorderly persons or apostates—that in both Churches there always has been, and still is, a numerous body of ministers eminently distinguished by their piety, diligence, and fidelity, by purity of faith and soundness of

doctrine, whom none of them could either be afraid to own as their friends, nor ashamed to follow as their instructors. It could not, therefore, surely be considered as an unreasonable measure for them to endeavour henceforth to unite together, in the same service of Christ, and the same worship of God, all such as give evidence that they belong to the household of faith—that such a union in worship, doctrine, church discipline, and government, would be attended with the happiest results among all ranks of civil society. All religious divisions would then come to an end. Parents and children, masters and servants, would then go up together to the same place of worship; whereas, at present, at the return of every Sabbath, the family was often dispersed. Children thus went from under the eye of their parents, and servants from under the eye of their masters; and many of them, under pretence of going to church to worship God, often went to assemble with profane and irreligious companions, and perhaps into the haunts of profligacy and vice. Even this alone was an evil of such a magnitude as ought to influence every Christian to use his utmost exertions to accomplish a union in religious worship, in which there would be no such evils to deplore. In the family journey to the church of God, the young would then meet with no wicked companions to allure, and no powerful temptations to lead them to folly. If God, then, has not utterly abandoned the Established Church—and who can be so bold as to aver that he has utterly forsaken her—what can there be which should prevent any good Christian from uniting in her worship, and joining in her services and exercises of devotion? If those who belong to a different denomination and different communion, can unite in family prayers in their master's house, or at funerals, or any other public meeting, why might they not also accompany him and his family in public to the throne of God, and to the house where his honour dwelleth? Do not all who believe in Jesus, and all who sincerely call upon Jehovah's name, and serve the true God, belong to the household of faith, and to the general communion of saints?—and why, then, should there be any longer among us any religious separation? As we all profess to be travelling to the same blessed place, why should we fall out by the way, and not walk together? Let none of us, therefore, say to another, Stand by, for I am holier than thou; but rather let each esteem others better than himself, that we may thus testify the truth of what we really are, and what we all profess to be—friends and brethren. He then brought forward several resolutions, which, if adopted by those present, might afterwards be submitted to their respective church judicatories. The substance of these resolutions was, that the people under their charge might be allowed freely to attend divine worship, either *in the meeting-house or established church*, when it shall be performed in the one, and not in the other; that the Seceding clergy should continue precisely in the same state as they now were; but that, in the event of a vacancy taking place, the kirk-session should elect as many elders of the Secession Church as should equal their own number; that the meeting-house should then cease to be a place of public worship; and that the congregation should return to the Established Church: That, in case these resolutions should be agreed to, it should then be considered how far it might be proper to admit the members of either congregation to communion

with one another, and make it optional to the ministers to assist each other in dispensing sealing ordinances to their people ; that, in parishes in which the established church should not be sufficient to contain the people, or which might not be conveniently situated within their reach, the meeting-house should be converted into a chapel of ease ; that, if such a union should take place, it might be submitted to future consideration, whether it would not be advisable for the Church to petition Parliament, to make a similar allowance to the Secession clergy in Scotland, as had already been done to the dissenting clergy in Ireland, who are divided into three classes—those of the largest congregation receiving L.100 ; the second, L.75 ; and the third, L.50 per annum ; that such an allowance might be requested only during the incumbency of the ministers of the Secession, and no longer ; that the union, in this view, might be rather a benefit than a disadvantage ; and that it might also be considered how far it would be practicable to unite the provisions made for ministers' widows into one fund.

The members of the *United Associate Sessions* having heard these proposals, and deliberated upon them, were unanimously of opinion that they could not adopt or approve of the *first* resolution, upon which the kirk-session, judging that nothing further could be done at present to accomplish the object of their meeting, they ordered their clerk to engross these resolutions in their record, that, if required, they might have recourse to them at some future period, if any more favourable prospect of success might hereafter occur.

It was stated, on the other hand, by the Seceding ministers, that they disclaimed the idea of being ranked with dissenters from the Church of Scotland, inasmuch as they still adhere to the standards of the Church, testifying only against deviations from the doctrine, worship, discipline, and government avowed in these standards, and regarding anything amiss in the constitution of the Church, as capable of being remedied by measures for which the constitution itself, like that of our country, sufficiently provides : That, when the Seceders left the Church of Scotland, they did not regard their reunion with her as hopeless, nor can it ever be their wish that the causes of separation should continue ; and that they will assuredly co-operate most cordially in any plan for having these causes done away : That, as they have long acted in a distinct ministerial and judicative capacity, it cannot be expected they will relinquish the ground they have taken, and the advantage they now possess for prosecuting reformation, without a fair and Christian discussion of the original grounds of separation, and such other matters which have since occurred, as they deem of importance to the interests of religion ; nor can their return be expected without such an issue on these points as shall appear to them agreeable to the word of God, the supreme standard of faith and manners : That the only proposal which it seems to those of the Secession present at this meeting, can with propriety be made, is, that the General Assembly evince their desire for the restoration of Seceders to the Church of Scotland, by reviewing the original grounds of separation, as given in to the Assembly in 1733 and in 1739, and sending the result of their deliberations on these grounds to the supreme courts of Secession, with a distinct statement of the terms and forms in which they are willing to receive the Seceders, which will pave the way for

other requisite arrangements. The minister and kirk-session of the Established Church stated to the meeting their sincere regret, that nothing farther could be done by them at present towards accomplishing a union so desirable, and which they trusted might have been attended with so many and great advantages, both to themselves and to the community. It is not unworthy of notice here, that the committee which first commenced a correspondence on the subject of Secession union, was formed at Mid-Calder, by individuals of the two Secession congregations there, in August 1818, after which the correspondence became very extensive, and led to the union which afterwards was accomplished in September 1826.

*Antiquities.*—Although the ancestors of the Torphichen family belonged to a religious order of knighthood, yet no trace of the existence or ruins of any religious house has ever been discovered in this neighbourhood. The remains of several mansions which bear the mark of great antiquity, however, are still to be seen in this parish, such as Cairns Castle, Murieston Castle, and, till lately, the foundation of an ancient building at Pumpherston. If common report can be relied on, some of these have been baronial residences, and seem to have been fortified places in troublesome times. Respecting the old castle of Cairns, which consists of a double tower, report would induce us to believe that it was founded by Sir William Crichton, Lord High Admiral of Scotland, who had a possession in the parish of Cramond. This person is said to have had many contentions with his rival, William, the eighth Earl of Douglas. He was Lord High Chancellor of James II., and who, in 1449, was sent in that capacity, along with other envoys, to the Continent, to espouse, for his royal Master, the Princess Mary of Guelderland, and whom Pitscottie, the historian, recommends as a man of splendid talents, and who died in 1454, without leaving in Scotland so able a minister. This castle is supposed to have been built about 1440, and Sir William is said to have been connected with the noble family of this parish. These reports, however, are destitute of any historical proof.

Murieston Castle, now the property of Mr Keir, having fallen into decay, the present proprietor has repaired, or rather rebuilt a small portion of it. The other very ancient building at Pumpherston, the property of the Earl of Buchan, has long been in ruins, and has lately been entirely removed. The mansion-house of Linhouse, likewise, bears the marks of great antiquity, having towers and battlements, which are still in tolerably good preservation. On the lintel of the outer door is inscribed, 1589, "*Nisi Dominus frustra.*" The present proprietors of this estate wish to change the name of Linhouse into that of Burnbrae.

In the south-west district of this parish is a Roman camp or post, in a state of tolerable preservation. It stands on a commanding situation, on the summit of an eminence called Castle Greg, (*Castellum Gregis*,) near the passage of the ridge which separates Lothian from Clydesdale, and to the west of which passes the road from this parish to Lanark, by Crosswoodhill. In this camp, now the property of Alexander Young, Esq., of Harburn, several Roman coins have been dug up in good preservation, on which the Roman Eagle is sufficiently apparent. This camp is not situated in the parish of West-Calder, as

has been supposed by the author of the last Statistical Account of that parish, but in the farm of Camilty or Cameltree, in this parish. Some years ago, three enterprising young farmers dug up the foundation of the *Well* belonging to this camp; and, under the great stone in which the flag-staff had stood, they discovered a considerable quantity of Roman coins, some of which were purchased by a goldsmith in the city of Edinburgh, for which he gave, part in cash, and part in silver shoe and knee buckles. Some of these coins, however, being preserved, they were given to Mr Young of Harburn, the proprietor, who retained a few of the most remarkable of them. They were in complete preservation, and bore the effigies of several of the Roman Emperors—viz., of Vespasian, Domitian, Adrian, Antoninus Pius, Marcus Aurelius, &c. Of these he gave a complete set to the late *ex-Royal* Family of France, Charles X. and his son, who visited him at Harburn, when they were last resident at Holyrood, in Edinburgh, and several of them he presented to the present Duchess of Hamilton, and to her son, the present Marquis of Douglas. These were all found in what is called the *Well* of the camp, which is a hollow where the flag-staff stood, and were discovered after the young men had dug up a considerable portion of the pavement. The entrance into this camp was by a Roman road or *causeway*, which may be seen marked on the map of this county. It extends eastward through this parish, and, as the word implies, it terminated at Causeyend, a small village or farm in the adjoining parish of Kirknewton. The termination of this Roman road, at this place, renders it not improbable that it may have had a communication with Cairns Castle, from which it is distant not more than half a mile. At a small distance eastward from Causeyend, is Auchnoull Hill, from which the Roman commander might easily see his fleet. Here, as at Castle Greg, he had a complete view of the coast of the Forth, with the whole course of the river Almond, composed of three mountain streams, flowing through this parish, and issuing into the Frith at the port of Cramond, a few miles east of Queensferry, where the Roman fleet lay at anchor. If it were not foreign to the nature of a Statistical and Historical Account of this kind, it would be no difficult matter to trace Agricola's course from the place where he first landed in Scotland, at the Solway Frith, to the place where he crossed the Forth, either at Cramond or Blackness, and landed his army on the opposite coast of Fife. Roman stations are to be found at Lockerby, Moffat, Crawford, Carstairs, and Carluke, the two last of which are not far distant from Castle Greg. At each of these places there are remains of his stations, which are all of one particular form peculiar to himself, being oblong, and not square or parallelograms, except that of Burnswark, which was an old Roman town antecedent to his arrival. The camp at Castle Greg, in this parish, extends about 566 feet in length, by about 526 in breadth; but its ditches and circumvallations are now much defaced. The circumstance of this Roman Causeway running through the highlands of this parish, therefore, is an unquestionable fact. At one time this road was in tolerable repair, till several years ago, by an unlucky oversight, it was dug up and much injured and obliterated by a road-maker, who used the stones in the way of his profession, to save himself the expense of procuring other more distant materials.

The ancient part of the building of Calder House may also be considered as a work of great antiquity. The walls are impenetrably



hard, and are about 7 feet in thickness. The great hall, which is now the drawing-room, stands upon arches, and, in early times, was paved with stone.

In this large apartment, formerly called the *Hall* of Calder House, the great Reformer, John Knox, administered the Holy Sacrament of the Supper, according to the Protestant form, for the *first* time in Scotland after the Reformation. This room, accordingly, is appropriately adorned at the one end by an excellent portrait of the Reformer, from which are taken almost all the common engravings of this wonderful man; and, at the other end, is a portrait of the beautiful Queen Mary, the unfortunate, if not the innocent object of his animadversions. On the back of the Reformer's portrait is the following inscription:—*"The Rev. Mr John Knox"—"The first Sacrament of the Supper given in Scotland after the Reformation, was dispensed by him in this Hall;"* and, on the back of Queen Mary's picture is written, in an ancient hand, *"Jo. Medina Pinxit. 1753."*—That the Sacrament was dispensed in Scotland by Knox, on various occasions and in different places, before this time, is abundantly clear from Knox and Calderwood's History, and from Woodrow's valuable MSS. vol. vi. p. 10, also from Dr Cook's Hist. of the Reformation, and Petre's General History of the Church, Part ii. p. 184; but, in all the instances mentioned or alluded to by these authors, the Sacrament must have been dispensed privately, and when the Popish Church was in great vigour; whereas, when it was dispensed at Calder, the Reformation had made very considerable progress, both at home and abroad; and therefore there can be no reason to doubt but that this was the *first* open celebration of it, in conformity to the practice of the Reformed Church in Scotland, after the establishment of Presbyterianism, by act of Parliament, in 1592. The church of Calder being formerly a Popish church, might want the necessary furnishings and conveniencies for the celebration of an holy ordinance of this nature, and this may account for the inscription on the back of the picture, that the Sacrament was dispensed at that time in this Hall.

The uniformity in the administration of the Sacraments, according to the Geneva book of common order, was agreed upon at the meeting of the Assembly in June, 1562. When George Wishart dispensed the Sacrament of the Supper in the castle of St Andrews, to the friends and servants of the Governor, in 1546, immediately before he was fixed to the stake at which he was burnt, he dispensed this holy ordinance according to the English form. Buchanan states, that, having given thanks, he broke the bread, and gave a little to each, and in like manner he gave the wine, after he himself had *tasted*, which is conformable to the practice of the Church of England. If the Presbyterian minister have no other brethren assisting him, from whom he can receive the communion at the next table, he is to communicate at the first table by breaking the bread and partaking of the wine himself, as Wishart did; and in this respect Wishart differed nothing from the Geneva, or present form. It has been alleged that our communion cups were those originally used by John Knox, in the first dispensation of the Sacrament after the Reformation, and that originally they were two silver candlesticks reversed. The same thing has been said of the cups in other parishes. But, although the figure of the cups may countenance such a suppo-

sition from their peculiar shape, resembling a very large and a very small tea-saucer, with a stalk of a few inches between them; yet these cups, of an elegant shape and rude manufacture, were certainly fabricated after the Reformer's death, as appears from our Session Record of 2d May 1673, which runs thus—"Whilk day the Session ordeined two communion cups to be bought for the use of the Church of Calder, with the mortcloth money in Thomas's hands." On the upper rim of these cups is engraved, "I wil take the cup of SALUTATION AND CALL WPON THE NAME OF THE LORD," and, on the under rim or bottom of the cups is "FOR THE KIRK OF CALDER. 1673." The communion plates and flagons are of pewter, and were the gift of Lady Torphichen, and the engraving on them is Lady Jean Hume, Lady Torphichen, 1721. The plates used for collecting the charity of the congregation, are also of pewter, and have the following: "For the Parish Church of Mid-Calder, 1749."

In the middle of the kitchen of Calder House, is the deep draw-well already noticed; and, if tradition can be trusted, there was a secret concealed passage under ground, from Calder House to the church or village of Mid-Calder, from which it may be supposed that, at an early period of our history, Calder House must have been a place of considerable strength. The original entrance to this ancient mansion, in former times, was by what is called the Iron Gate, from the Edinburgh public road. This gate, with its massive pillars, is still to be seen. On the top of this gate is a coronet of iron, and the date on the inside of the pillar is 1660. On these pillars are sculptured in bas relief, the Scotch Thistle, the Crown, and the bloody heart; and the same figures are also represented on the top of the iron gate.

There is another building of great antiquity—the parish church, which stands at a small distance from Calder House, on the south of the village. The church and churchyard are separated from the street by a handsome iron railing, and are surrounded on the other three sides by a stone wall seven or eight feet high. The lofty trees which overhang the walls render the situation peculiarly picturesque and beautiful. The church itself is an ancient Gothic structure, and towards the south and east has four magnificent windows of Gothic architecture. The upper portion of the fine arches within have been cut off, and a modern roof has been substituted, by which the antiquity of the building has been considerably obscured. This appears to have been only the chancel, or a part of the edifice originally intended, and, in modern times it has been enlarged by an addition to the west end, of a very inferior style of architecture. No date has been discovered to record the time of its erection. The walls of the church are in excellent repair, and it was newly roofed in 1792, but the seating is of an earlier date. At the east end of the building is attached a cemetery belonging to the noble family. On the pinnacles placed upon the corners of this cemetery, are engraved the family arms of Torphichen, quartered with the bloody heart of the warlike Douglas; so that, if this part of the building be coeval with the church, it must have been erected about the end of the 15th century, probably between 1450 and 1500, as may be supposed from the style of the building. This cemetery had been formerly the vestry, as appears from the following extract from the Book of Deaconry, December 27, 1698:—"The minister

reports, that My Lady Torphichen allowed the Session to repair the vestry for a Session-house, as they desired. The Session appoints the Eleemosynar to get money from my Lord's rents, to repair the same. Concluded with prayer." The belfry of the church appears to be of modern construction, and on the south side of it are the fastenings for a clock; and there can be no doubt that at one time the inhabitants of Calder were privileged with this convenience. On 21st February 1692, it is recorded, that this day, Robert Ker, kirk-officer, made his complaint to the Session, that, for the space of two years bygone, he had gotten no acknowledgment for his pains and some charges he had been at for the *knock*, whereupon the Session thought fit to give the said Robert Ker this day's collection, £2 Scots; and again, the following year, in April, he is paid for his care of the *knock*. What became of the said *knock* is not now known; but a report was formerly current in the parish, that, many years ago, the said *knock* was sent to be repaired in Edinburgh; but, as the Session or heritors had objected to pay the cost, the person who had repaired it thought proper to reimburse himself for his trouble, by disposing of it to the magistrates of the town of Peebles. But be this as it may, the town of Calder has no longer the convenience of a church clock, although the church bell is rung regularly at six every morning, and at eight every evening, excepting on Sabbath. Around the under border of the church bell is this inscription, "*Soli Deo Gloria. Arent Vander Put, me fecit Rotterdam, 1663.*" This bell was given by Sir Patrick Hume, afterwards created Earl of Marchmont, Lord High Chancellor of Scotland, to Lady Jean Hume, his youngest daughter, born 1683, the wife of James, seventh Lord Torphichen, and grandmother to the present Lord.\*

This building seems to have been originally intended for a much larger structure, from the projecting stones in the back wall, which make it obvious that it has been of greater breadth, as well as from the foundations of a wall towards the west end, which were dug up, a few years ago, in order to enlarge the burying-ground. It is supposed that there is some kind of vault or pavement below the passages and seating of the church, as an iron rod, when forced down from 3 to 4 feet, in various places within the walls, was always obstructed, at the same distance, by some hard, and apparently stony substance. This is the more probable, from the floor of the vestry, now the cemetery, being from three to four feet lower than the floor of the church.

On the stones which support the Gothic windows, are sculptured various coats of arms, of the Stewarts, Douglasses, and Torphichens, with the initials of the family name, from which there is some reason to believe that this fabric was originally erected by some of the ancestors of this noble family. The inscription on the north side of one of the pinnacles of the cemetery, is "*MARIA,*" and on its other side, is "*NE CORRVAM;*" and, immediately above this motto, is a shield, with the bloody heart, supported by angels, over which is a helmet and a lion's head. The third letter of this inscription is a Saxon character, which

\* This Sir Patrick Hume, at the time when the Persecution broke out, about 1684, was concealed for a month in a burying-place, in a vault under ground, at Polworth church, and he afterwards escaped to Holland, and returned with the Prince of Orange, at the Revolution, and was made Chancellor of Scotland. See Woodrow, vol. iv. p. 505.

corresponds to the third letter of the Roman alphabet ; and the word, therefore, resolves itself into "*ne corruam*," let me not tumble down, or I shall not go to ruin. The same arms may be seen on the great seal of the order of the Temple of Jerusalem, as sculptured anno 719, with the exception of the bloody heart.

Immediately opposite the pulpit, within the church, are the remains of a very ancient wooden seat, on which is carved, in raised letters, the following inscription—"The Lord is my shepherd, I shall not want. 1595." It also contains the initials, J. S., J. L., and R. W. This seat was probably erected soon after the Reformation ; for it is certain that churches, in general, were not fully seated till long after that period. Near to this seat, when the church was lately undergoing a slight repair, several coins were found, of the reign of Charles I. ; and, hence, these coins may have been lost or left there, at some future erections or improvements, seeing that the seats were erected at different times, as best suited the taste and convenience of the occupants.

One of the arches within the church is supported by the figure of a man's head and shoulders, with his arms folded, crossing his breast. One side of the arch rests upon his back, and beneath his arms is the following inscription, *PETRO FECIT*. This letter *q* is a contraction for *us*, which makes the motto "*Petrus Fecit*."

*Tumuli*.—The tumuli or cairns, in Scotland, are also known by the name of laws or barrows. Several of these are to be seen all along the banks of the Almond, not only as it runs through this parish, but through all its course, till it unites with the Frith of Forth, at Crammond. On its south bank, about two miles west of the village, there may be seen four barrows or tumuli, near which, according to common tradition, a great battle was fought, in early times, between the Picts and Scots ; or at another period, when Constantine IV. attacked Malcolm, the Scottish general. Many tumuli or mounds of this kind are to be found, where dead bodies have been deposited. On examining some of these, the writer discovered a thigh bone in a stone coffin ; and, in another, part of a skull, and the under jaw-bone, in which the teeth were entire, and firmly fixed, and not materially decayed. Several other stone coffins were found, a few inches under the surface ; but all the rest of them were empty. A piece of iron, somewhat resembling the head of a battle-axe, was also found in one of these coffins not many years ago. At an early period of our history, the water of Almond is said to have been a very important *pass*, which may, in some degree, account for the great number of these barrows and stone coffins, which are everywhere to be found along its banks.

Several other artificial mounds are to be seen not far from the banks of the Almond. One of the most remarkable of these is, the *Cunnigar*, which signifies, the guard or keeper of the conies or rabbits. It lies between the Almond and the village ; and it is said that upon this mound, were burnt many of those unhappy, wretched creatures, called witches. In those days of superstition, Calder was considered one of the most noted places of their rendezvous. The writer has conversed with people in this place, who, in their youth, have known persons that were actually employed to guard those who were suspected of witchcraft. Their object was to keep the witch awake, because it was believed that, as soon as she was permitted to sleep, the evil spirit or

demon left her, and immediately went abroad, to do mischief. The friends and neighbours of the persons delated for witchcraft, entertaining this belief, and, at same time, wishing to prevent them from hurting any one, thought it an act of kindness to keep them awake, and for this purpose, they often found it necessary to pierce their flesh with pins and needles, sometimes with awls and sharp-pointed irons, red hot, and thus continued to torment them, if they refused to confess and acknowledge their guilt.

*Witchcraft.*—From authentic records, it appears that the art of witchcraft was practised in this parish at no very distant period. This species of superstition was, in former times, universally prevalent among all ranks ; and by the best and wisest statesmen and lawyers, as well as divines, of that day, it was carried to an extent which neither reason nor revelation could justify or excuse. It is nevertheless true, that a connection does subsist between the material and spiritual world, and perhaps more extensively than some of the philosophers of the present day may be willing to admit. It is impossible to tell what power or influence evil spirits may have, in filling the *hearts* of wicked men, with sinful desires and criminal designs. We may be utterly unable to comprehend the nature and effects of such an intercourse ; but that, in some way or other, it does exist, cannot be disputed, and to command that intercourse, attempts have, no doubt, been made of a highly criminal character, not only by individuals in the Heathen world, but by ignorant, envious, and wicked persons, and even by many professing Christians, heathenishly disposed. Witchcraft, sorcery, and enchantments, therefore, were made the subjects of special enactments, and of particular statutes, in the law given by God himself to the Jewish people. They were charged upon that people as particular and special crimes, on account of which they were visited with most signal judgments. But, although the witch of Endor deceived Saul, either by acting in concert with some other person whom she covered with a mantle, or by pretending that she saw a spectre, or was herself alarmed by a miraculous appearance, we are not, therefore, to give implicit belief to the monstrous mass of absurdity and fable which has been handed down by tradition from one age to another. Because the magicians of Egypt, along with Moses, were instrumental in converting their rods into serpents, and turning the waters of Egypt into blood, and although, by their enchantments, they brought up frogs to plague that people, we are not therefore called upon to believe that any old, malicious, or envious woman can, by the power of a familiar, or evil spirit, transform herself into a cat or a hare ; can transport herself through the air upon a broomstick in a moment, to some distant place, to attend a witches' dance, or to a field conventicle, to hear the devil preach ; or that she can sail the seas in a sieve or an egg shell ; raise storms in the air, and sink ships ; collect at her pleasure, and by invisible means, all the milk in her neighbourhood ; or that, by a few knotted straws or rushes, or a mishapen image of clay stuck full of pins, she can destroy her neighbour's cattle and himself ; or, that she can remove the sickness of one person and lay it upon another ; or can make people frantic ; or make spirits either trouble or follow persons, or haunt certain places, or take possession of certain bodies ; or, that she can cause her familiar spirit to make itself visible, by assuming any dead body, and using the

form thereof. The Scriptures utterly forbid us to ascribe any such power to human beings, through the influence or agency of evil spirits, or to associate with such as pretend to it. In that divine law given by God himself, to his own people, those who dealt in such attempts were declared guilty of a capital crime, as impious intermeddlers with his own peculiar prerogatives, and as intentional murderers of their fellow men. The word of God forbids any external acknowledgement of evil spirits, either in themselves or pretended agents, otherwise than to guard against being *inwardly seduced by them*. All attempts at witchcraft, sorcery, or enchantments, and using of charms for occult purposes, are declared to be doctrines of devils, and those who practise them must be regarded so far as serving or worshipping the devil.\*

\* Magicians, at first, were said to be only natural philosophers, who accomplished, by experimental philosophy, what might, by weak minds, be considered as the effect of diabolic power. The Egyptians were the first magicians mentioned in history, and that people so famed for their early wisdom, believed in the existence of evil spirits, or *demons*, as not only the great agents in magic, but also that these spirits presided over the elements of earth, air, fire, and water, as well as over the persons and affairs of men. Diviners, afterwards, everywhere abounded in Canaan, nor do the Hebrews seem to have taken due care to extirpate them, till the days of Saul. These persons set themselves up as a kind of prophets; and, by observing the flight of birds, or looking into the entrails of animals offered in sacrifice, pretended to tell future events. Astrologers were famous among the Heathen, chiefly at Babylon, and multitudes of them were maintained there at the public expense, whom they might consult on every difficult occasion. Many people from Chaldea or Arabia in the east, who were renowned for these arts, practised their deceptions among the Jews for the sake of gain; a young sorceress, at Philippi, vexed Paul and Silas till they cured or dislodged the Devil that possessed her. Vast numbers of diviners of Ephesus were also converted to the Christian faith, and burnt their magical books, to the value of 50,000 pieces of silver. In the days of the Apostles, *demonology* constituted a considerable part of the philosophy of the Jews and Heathen. They ascribed every disease with which the human body was afflicted to the agency of some evil spirit or demon. All degrees of sickness, melancholy, or convulsive fits, or of fury or insanity in men, or diseases in cattle, they considered as inflicted by some evil spirit which had taken possession of the body of the patient, and could not be ejected but by charms and incantations. That the magicians could not only cure the sick, but inflict diseases and work miracles, by subservient demons, was universally admitted. The Greeks and Romans also believed in the same superstition. Suetonius, the historian, mentions that Octavius Cæsar burnt all the books (*Fatidicorum*) of the fortune-tellers, to the number of upwards of 2,000, and only reserved the writings of the Sybils. It appears that all these deceivers employed their craft according to the condition and passions of the persons on whom they practised their arts.

Some have supposed that the revival of this superstition, under the name of witchcraft, in later times, had in some degree been encouraged by the Popish and Puritanic clergy, for the purpose of exalting the sanctity of the church and priesthood. It was looked upon as a demonstration of the power and influence of religious persons, that, by prayer and fasting, they were enabled to give relief to such as exhibited symptoms of being possessed with evil spirits or demons. Many of the wisest men in the dark ages admitted the reality of witchcraft; and even many of the English clergy and judges were dupes to this imposition; and, indeed, there can be no doubt but that the conviction of many of these wretched creatures called witches, must be attributed chiefly to the ignorance and fanaticism of the clergy and judges. It certainly requires a high degree of intellectual cultivation to raise the human mind above the vulgar influence of superstition. Although, during the course of the 17th century, very considerable improvements were made both in the sciences and in every branch of human learning, yet there was one circumstance which in some degree contributed, if not to promote, at least to prolong the influence of this monstrous absurdity.

At one period, Calder, like many other places in Scotland, was noted for this species of superstition. From the records of our session, as well as from other documents, it appears that many poor deluded creatures in this parish, had brought themselves under the suspicion of witch-

In the first year that James VI. took possession of the English throne, witchcraft and sorcery were declared to be capital crimes. Unfortunately, a considerable portion of his Majesty's literary reputation rested upon his Essay or Dialogue on the subject of Demonology, and it was alleged that his Majesty's lawyers, and many of his clergy, in a short time, became converts to the same creed. It is not improbable but this may, in some degree, account for the great number of unhappy creatures which fell under the suspicion of witchcraft, during the period of his Majesty's reign. Even Sir George M'Kenzie, who was at that time the King's advocate, from his conducting so many trials for that crime, was supposed to be himself a believer in witchcraft, although he remarks that it was "dangerous that these poor ignorant creatures, who were of all others the most simple, should be tried for a crime which, of all others, is the most mysterious." He stated that these poor creatures, when defamed, became so confounded with fear and the close prison in which they were kept, and were so starved for want of meat and sleep, that it was enough to disorder the strongest reason, and that hardly wiser and more serious people than they could escape distraction; that most of them were tortured by their keepers, who, being persuaded they did God good service, thought it their duty to vex and torment them; and that this usage was the ground of all their confession. When Justice-depute, he went to examine some women who had confessed judicially. "One of them, who was a silly creature, told him, under secrecy, that she had not confessed because she was guilty, but, being a poor creature who wrought for her meat, and being defamed for a witch, she knew she would starve, for no person thereafter would either give her meat or lodging, and that all men would beat her, and bound dogs at her, and that therefore she desired to be out of the world; whereupon she wept most bitterly, and, upon her knees, called God to witness what she said." Another told him she was afraid the Devil would challenge a right to her, as the minister said when he was desiring her to confess; and therefore she desired to die. He therefore recommends it to judges and the wisest ministers, to be cautious in this. Vast numbers of these poor ignorant creatures who did not understand the nature of what they had been accused of, and who mistook their own fears and apprehensions for witchcraft, were condemned and put to death. Calder witches were proverbial in this neighbourhood, as the Lancashire witches were proverbial in England; but in almost every parish in Britain, and over the whole Continent of Europe, and even in British America, multitudes of these poor defamed creatures were put to death. In England, at one time, seventeen were found guilty by a jury; and the prudent judge, not being satisfied with the evidence, the Bishop of Chester was appointed to examine them, and they were reprieved. When the people and judges became more enlightened, and examined into the causes of these prosecutions, they discovered that many of these absurd accusations were brought forward by malicious persons, and others by designing impostors, as a source of emolument, and under the contrivance and delusion of Jesuit priests.

Those who practised this *black art* were supposed to have had different powers, according to their different ranks and different names. Some were called witches, others magicians, sorcerers, necromancers, fascinators. By magic the initiated came to know more than what was lawful to be known, by divination they pretended to reveal what was past, present, or to come; by sorcery, they cast lots to bring hidden things to light; by necromancy, they pretended to call up and consult the Devil, in the form of some dead person, and by fascination, they could hurt different creatures, by envious looks, or an evil eye. Now, the same person often pretended to all or most of these arts; and it is therefore difficult to know exactly the precise import of each particular kind.

But, before a witch could do all or any of these, it was necessary to enter into compact with the Devil in some visible shape. In doing so, the witch must renounce God, and her baptism, and engage to serve the Devil, and do all the mischief she can, as occasion may offer, and leave her soul and body to his disposal after death. The Devil on his part states and agrees to the shape in which he is to appear to her, and the service she is to expect from him, on the performance of certain charms or cere-

craft. The place where it is said they were burnt is the Cunnigar, formerly mentioned, near the bottom of the village. Tradition reports that, on the spot where their ashes remained, no grass would ever grow; and, if this be the case, many of these deluded creatures must have met with an unjust and untimely end; for, on this mound called the Cunnigar, the verdure, at this hour, is fresh and green. Many human bones, however, have *lately* been found here, but without the slightest appearance of having ever been touched by fire. That several convictions, at least, and likewise some executions for witchcraft, actually took place in this parish, there can be no reason to doubt, as may be seen by the following extracts from the records of the kirk session.

"11. Februar [1644.]—The sessioun ordanit That Agnes bischope now in the tolbuith of Lynlythgow quha being of befoir delait to the Sessioun To be ane commone charmer was by the presbitrie of Lynlythgow ordanit to be keepit in ward till tryell and clearing of the samyne was ordanit be the sessioun this day To be brought to Calder and detainid in ward for cleiring and tryell To be visit theiranent quihilk was done according To the said ordinance and the said Agnes bischope after dew tryell and examinatioun was both by hir awn confessioun and also Relevant probatioun sufficientlie cleirit To be ane commone charmer and ane hynous and notorious witch and for the samyne be the ceivill judge was condemned to be execute according to the law.

"8 July [1644.]—Also compeirit David Aikmane spous to vmquhill Jonet bruce quha was schortlie execute for witchcraft and their the said David Aikmane voluntarlie of his awin accord gave and granted to the sessioun the sowme of ane hundred merkis money of and frome the first and Radiest of his and the said vmquhill Jonet Bruce their

monies. To some he gives a spirit to correspond with, and an imp to serve them as their familiar, known by some odd name to which they are to answer when called; and this compact is made verbally with such as cannot write; and such as can write, sign a written agreement with their blood. On the witch's body the Devil fixes some secret mark as his seal to know his own by, and this is generally like a blue spot, which ever afterwards remains insensible and does not bleed, though pricked by a pin, awl, or bodkin. Some witches are black, and always do mischief, and others white, who can use means to undo enchantments, and who discover those that are bewitched, and by whom. Some can pass through shut doors, and others transform themselves into cats, dogs, hares, foals, or other creatures. In the confession of one of the Lancashire witches, an old blind woman, she says that the speediest way to take a man's life away by witchcraft, is to make a picture of clay like the shape of the person they mean to kill, and dry it thoroughly, and, when you would have them to be ill in any one place more than another, then take a thorn or a pin and prick it in that part of the picture you would have to be ill; and when you would have the whole body to consume away, then take the remnant of the said picture and burn it, and so thereupon by that means the body shall die.

In the trial of witches, the proof lies in the person either being under bad fame, or being the child of a convicted witch. It is said that a witch cannot shed tears, and cannot say the Lord's Prayer. Witches may also be tried on evidence of sink or swim, in which case the accused were sometimes stripped and thrown into a river or pond, having their thumbs and toes tied together, where, if they sank, they were held innocent and consequently drowned, but if they swam, they were dragged forth to prison, and afterwards tried and condemned. But the most common and ordinary proof was by the confession of the person accused, or by witnesses who had seen them at their midnight feasts and revels, and when met to adore their infernal master, or to hatch their mischievous projects when other people are asleep. This confession, however, requires to be voluntary, and not extorted.



debtis guides and geir for defraying of the charges bestowit on hir the time of hir tryellis and impresonment and assigned the said sessioun theirto, and gave power to thame To uplift the samyn and persew thairfor according to the law in signe and takin quher of the subscribit thir presentis in Judgement be twitching the pen of me clerk tharto." The violence and cruelty with which these deluded creatures were treated, continued unabated for a long period, although it appears that the lesser offence of *charming* was passed over in the case of one of them that same year, by a public rebuke. "3 Sept. 1644. Being the Sabbath day Jeane Andersoune maid publict satisfactioun in sackcloth for charming and the minister maid certificatioun To hir gif ever scho could be tryed To use charming hereafter scho could be halden ane witch."

But one of the most remarkable instances of this unaccountable delusion occurred in this parish, so late as 1720. A young gentleman, of a most respectable family, then twelve years of age, born 1st November 1708, having been afflicted with some lingering and painful disease, the nature and cause of which they could not discover, he was supposed, according to the delusion of the times, to be labouring under the influence of witchcraft. Application was accordingly made to the minister of the parish, Mr Lookup, who, like the rest of the brethren at that time, appears to have been tinctured with this prevailing superstition. Having consulted with some of the neighbouring clergy, he at length appointed a day of solemn fasting and prayer, on Thursday the 14th day of January 1720, on which day he requested Mr John Wilkie, minister of Uphall, to preach a sermon. The Presbytery of Linlithgow having met on the day previous, a number of his brethren were appointed to be present on that occasion, as appears from the following minute of said Presbytery.

*" Linlithgow, January 13th, 1720.*

"The moderator (who was Mr John Lookup, minister of Mid-Calder) represented that, for some time bygone, a most respectable family in his parish hath been infested with witchcraft, that Mr P. their son has been sadly tormented, and that already a woman has confest her sin of witchcraft, and that she has been active in tormenting the said child, the said family desires the help of the brethren's prayers, both in public and private, and that a committee be appointed to meet at Mid-Calder for prayer and conference on that head. Then the brethren, entertaining a tender sympathy with the said family, the Presbytery appoints Messrs John Brand, John Kinnaird, James Houston, John Brown, John Wilkie, and Robert Hunter, to meet at Mid-Calder tomorrow, with the moderator, for that end, and recommends to each of the brethren to put up their serious prayers to God, both in public and in private, in behalf of the said family and child, and that each of the brethren attend the said family, as they shall be called."

There is no report by the brethren as to their diligence, nor any further notice of this affair, in the records of the Presbytery. A sermon was accordingly preached on that day by Mr John Wilkie, minister of the gospel at Uphall, from the following text, James iv. 7 :—"Submit yourselves, therefore, to God ; resist the devil, and he will flee from you." In the preface to this sermon, which was preached on Thursday, 14th Janu-

ary 1720, at a congregational fast, and which was published at Edinburgh same year, it is stated, that it was preached on a melancholy occasion, which had made a great deal of noise in the country; that two of the persons delated for witchcraft, had acknowledged their guilt, and were present; and that three more had since made the like confession; that they had done a great many mischiefs to several persons in Calder and in the neighbouring parishes; and that other things were daily coming to light in this case. The author cautions every person to beware of denying the witchcraft, till he has informed himself, by sure hands, what evidence may be had for the thing, and found that not to be sufficient; and he further adds, that it was not the author's inclination, but the importunity of that person whose family had a large share of the malice of these wicked persons, that had put this discourse into print. In some inferences from the subject, the author addresses the two women who had confessed, and says—"Two of you, who here stand before me, have confessed yourselves guilty of this wickedness. Others of you have this charge brought against you, and God and your own consciences know the matter, and it will one day be brought to light. I wish it may be in time, before your case is absolutely beyond remedy." After stating to them that they had exposed themselves to the wrath of God; he adds—"Your case is most terrible; your misery is great beyond all conception and expression. And most just it is that it should be so, for your sin and wickedness are inconceivably and inexpressibly great. What wickedness is this, to have preferred the Devil to the most blessed God for a master?" And he concludes by exhorting the people that, "as the Devil has come down in this place, having great wrath, they should be fervent in prayer, that God, who hath chosen Jerusalem, would rebuke the Devil in all his attempts in this place, and, in particular, that he would say of this child whom Satan hath sore vexed, as the angel did of the church, *Is not this a brand plucked out of the fire?*"

It is somewhat strange that no notice has been taken of this affair in the records of the Kirk-Session. It appears, indeed, that no meeting of Session had taken place, or at least it has not been recorded, from the 29th November 1719, to the 14th February 1720. The several Sabbath collections are regularly marked to the 6th December; but on the 14th, 22d, and 30th, no sums have been put down, and the half of the page is left blank. It has been said that this worthy family had been so much distressed with the malicious proceedings of the Calder witches, that they used all their influence to have them extirpated out of the parish. If tradition can be believed, this bewitched youth was a tricky boy, who made frequent visits to old Ellen Fogo, who was one of the suspected sisterhood that lived in the village. Her husband was John Dunipace, whose name, as a pauper, flourishes on the pages of the book of deaconry many years before 1720; but it appears no more after this period of the 14th January of that year, from which it may be supposed that John was deprived of his pension in consequence of Ellen's misconduct in this affair. It is farther said that, at length, the youth himself, by her instructions, was able to perform many curious exploits, by which he astonished the natives, such as making all the ploughs in the neighbourhood to stop when he pleased, or go on as he wished

them. This, no doubt, was done by collusion ; but, by the common people, this and many other frolics which he performed were ascribed to the power of magic, although wiser and more considerate heads viewed them only as the innocent tricks of a youth devoted to fun and merriment. Being a sly youth, and of no mean talent, he acquired so many strange tricks that at length he was reputed to be himself a wizard, or what in Scotland was called a *Warlock*. He was afterwards sent to India ; and, as the story goes, a large fleet of the enemy hove in sight, from which the captain conceived it was impossible to escape ; but this Mr P. having got a whittle and a stick, he sliced off a great many thin pieces, and, as soon as he cast them into the sea, all of them, by the power of his magic, were immediately converted into ships of war in full sail, by which means the enemy's fleet was terror-struck and fled. But, be this as it may, this youth arrived in India, and afterwards obtained the command of one of the company's country ships on account of his gallant behaviour in repulsing a party of Angria the pirate's men, after they had boarded the vessel. He continued in India in the line of his profession till he acquired a handsome fortune. Some beautiful table china with the family arms, the fruit of his industry, are still to be seen at the hospitable table of his friends in this country. On returning home in his own ship with all the fortune he had acquired, he perished in a storm, together with all the property of which he was possessed. It might have been supposed that, in this enlightened age, no trace of this superstition would now be found. It, nevertheless, appears that, so late as July 1825, a man was swam for a wizard at Wickham-skeith, in Suffolk, in presence of several hundreds of people, which proves the deplorable state of ignorance which prevails even at this present day.\* During the reign of James I. many of these impostors were detected, as may be seen by consulting Lord Somers' collection of miscellaneous tracts published by Sir Walter Scott. Among the ignorant of all nations, it is not to be wondered at, that such superstitious notions should formerly have prevailed ; but to find such a delusion, even among the lower classes of civilized society, in this enlightened age, is truly astonishing.

*Modern Buildings.*—There are no modern buildings deserving of particular notice in this parish, neither is there any establishment that can properly be called a manufactory. We have one paper and two corn mills. The former, which was used at one period for making wrapping-paper, is now employed in the manufacture of pasteboard. It is situated a little to the west of this village, on the Almond Water, and employs from eight to ten individuals. In the national almanac, it has been erroneously represented as employing about fifty persons. Below this mill, and near the village on the same stream, is the West Mill, the tenant of which has been accustomed to carry on a considerable trade for the supply of the Glasgow market. He purchases oats and barley, pease and beans, in Leith and the surrounding country, which he manufactures and conveys to Glasgow, partly by the canal, and partly by cartage ; and, although of late years, since so heavy importations have been brought from Ireland, this traffic has become less profitable, yet it is at present still carried on to

\* See *Times* newspaper, 19th July 1825, extracted from the *Suffolk Chronicle*.

a considerable extent. The other mill, which has been erected at Camilty, is about five miles south of Mid-Calder; and, although it is also very complete in its machinery for the manufacture of all kinds of grain, yet, owing to its great distance from the public road to Glasgow, it has been found inconvenient for carrying on any extensive and lucrative traffic.

#### IV. POPULATION.

In 1755, according to Dr Webster's report, the amount of the population of this parish was 760; and, in 1793, Dr Wilson, the immediate predecessor of the present incumbent, states it, in his Statistical Account of that date, to be 1251, of whom 588 were males, and 663 females, the latter thus exceeding the former by 75. Of these, 689 belonged to the country part of the parish, and the remaining 562 were inhabitants of the town. He represents the population as having been, for a few years previous to this date, rather upon the decline. In July 1827, the population amounted to 1505, consisting of 129 families of 600 souls residing in the village; and in the adjoining cottages were 152 persons more, leaving 753 for the country population. At that time, a considerable number of labourers from other parishes were employed to carry forward some public improvements. In 1831, the population was 1412, and, in 1836, it was 1404. Of this number, 636 resided in the town and adjoining cottages; and belonging to the country, including the village of Bellsquarry, there were 768; 649 were males, of whom 188 were married men, twenty-one were widowers, and thirty were full grown bachelors; and 755 were females, of whom sixty-eight were women upwards of forty-five years of age. The population in 1837 was 1369, leaving a decrease of thirty-five since the former year. The number of males was 656, and of females 713; and, of the males, 189 were married men, and 24 were widowers.

The above must not be considered as an accurate statement of the population of this parish, in so far as the numbers vary considerably according to the season of the year when the census is taken. Several large families, who reside during winter in Edinburgh, do not return to the country till the beginning or end of June; so that, if the names be taken up before that time, the numbers will be considerably less than they would be during the course of the summer and harvest months—and the census by the schoolmaster is generally taken in summer. Of late years, the population of the parish has also considerably diminished from other causes. Several, both proprietors and tenants, who had numerous families, have left the parish, and a considerable number of young men also, who have engaged in more promising pursuits, have gone to distant places; and, four years ago, about fifty individuals emigrated to America. The annual average of births during the last seven years is thirty-one; of deaths, twenty-five; and of marriages, thirteen;—but, as the Seceders seldom or never register the births of their children, and as most of the people, for a considerable time past, have refused to use the mortcloths, the exact number of births and deaths in the parish cannot be ascertained. For several years, it may be said that there have been no resident

heritors in the parish, excepting two very small proprietors. Among the nobility who have property in this parish, are Lord Torphichen, the principal heritor, and the Earls of Morton, Buchan, and Rosebery. All the other heritors are also highly respectable, and some of them are possessed of independent incomes from other sources. The number of persons who have landed property within the parish is twenty; and of these, all except three have land of the yearly value of upwards of £50; but of these two have property in other parishes, and the third has a revenue from other funds. Many of the tenantry also are in comfortable circumstances; and, considering their rank, the most of them, by their industry, skill, and sobriety, may be accounted very independent.

*The people*, in general, are of a hardy race, and very active. They are of a ruddy complexion, and rather above the common size. There is but one person belonging to the parish who is deaf and dumb. He is about eighteen years of age, very healthy, robust, and alert; and, considering his opportunities, very intelligent—having been, for some years, under the superintendence of the Edinburgh Deaf and Dumb Institution. It has been remarked, by some authors, that a judicious, careful observer may distinguish the peasants in one part of the country from those of another, from the fertility of the soil and nature of the produce; and that those who cultivate the most fertile countries have a fairer complexion than such as obtain a more scanty subsistence from an inferior soil. How far these circumstances may have operated upon the general appearance of the inhabitants of this district, it is impossible to tell; but, nevertheless, even among the labouring class of the community here, there are to be found many individuals eminently distinguished by the most pleasing regularity of features, and possessing the most just proportions of the human form. In the management of their own affairs they are, in general, cautious, intelligent, and acute. Among a very few of the most degraded class, there is reason to lament that the vice of drunkenness occasionally prevails, although even this is far from being habitual; but, in the more improved circles of society nothing is ever to be witnessed but the utmost propriety of conduct; and, upon the whole, with very few exceptions, it may truly be said that the inhabitants are strictly sober, honest, and temperate. In general, they are well-informed on the subject and duties of religion; and, in the country district especially, they regularly attend upon divine ordinances in their own places of public worship, on all occasions when not necessarily prevented. A few in the village, chiefly females of the lowest rank, have acquired the shameful habit of loitering on the Sabbath day at home. The Seceders, and those of the Established Church, live on the most friendly footing; and all ranks treat the clergy of every denomination with the utmost kindness and respect. On Sabbaths when the Seceders have no sermon in their own places of worship, many of them *now* attend the Established Church; and they no longer look upon those of the Establishment with coldness and indifference as formerly, because they do not exactly agree with them in some of their religious opinions. Their former reluctance to associate with them in their religious devotions on the Sabbath has, with very few exceptions, entirely vanished. The few Episcopalians who occasionally reside in the parish, likewise attend the Established

Church. The language and manners of the people generally, during the last forty years, are greatly improved. This, no doubt, must be owing, in a considerable degree, to the advantages of a *good* education which they have long enjoyed, and to the more correct pronunciation of the parochial and other excellent teachers. Accustomed as the people are to habits of constant industry, they have little leisure for indulging in the practice of the popular games and amusements which formerly prevailed. Old *Handsel* Monday, which is the first Monday after the 13th of January, however, is still devoted to merry meetings, visiting, rifle-shooting, or hunting. Once a-year also, there is a splendid masonic procession on St Andrew's Day, and another by the whipmen or ploughmen in June, occasioned by their friendly society, when they have a meeting in the parish of Kirknewton, where they generally settle their annual accounts, and dine together. The game of quoits is another amusement, to which the young men in the neighbourhood often have recourse in summer evenings; and the ancient game of curling, during the frost in winter, creates an uncommon interest among all classes of society, who mingle together, gentle and simple, when one parish or village challenges another to the friendly contest, which sometimes terminates with a plain substantial dinner of beef and greens, enlivened with occasional songs, curling toasts, and various merriment. Besides these, the youth of both sexes occasionally divert themselves at musical concerts and at dancing-school balls. The barbarous practice of cock-fighting has been long since happily abolished. The custom of thirlage, by which the farmers formerly were bound to have their corn ground at certain mills, and which was long considered as a grievance, has also been entirely discontinued.

In general, it may be said that the people are remarkable for their habits of cleanliness, both in their houses and persons, although among a few of the poorer classes, examples of the contrary may occasionally be found. This laudable habit has, perhaps, been in some degree, occasioned by the parents being under the necessity of sending their children to school clean in their persons and neatly dressed. By such means, no doubt, they have greatly improved, not only in their manners, but also in their habits and appearance. Porridge constitutes the ordinary food of the peasantry at breakfast and supper. It consists of oatmeal stirred into boiling water like hasty pudding, and it is served up generally with a profusion of excellent buttermilk. This food is supposed to be extremely wholesome and, at the same time, nourishing. Boerhaave calls it *cibum divinum*. Our English visitors can make nothing of this repast, and wonder how any one can use it. The dinner of the domestic servants and labourers commonly consists of Scotch broth, or of stewed potatoes, and of cakes made of oatmeal, and eaten with salted pork, or butter and cheese, and sometimes with buttermilk. In winter, they occasionally use salted beef for dinner, with which they make excellent barley broth; and the meat is afterwards eaten with potatoes. Animal food is more common of late years than formerly among all classes of society. The habit of tea-drinking is now almost universal, and not a few even of the poorest of the people use this beverage three times a-day, with bread and butter, for all their meals. At no very distant period wheaten bread was considered a luxury, and was rarely

to be seen excepting at some gentleman's table ; but it is now common among all ranks. Forty years ago, one baker was sufficient for the supply of the whole parish ; but, including journeymen and apprentices, there are now no less than nine, which shews the great change that has taken place during that period both in the kind of food and manner of living. At that period there was only one butcher, now there are generally three, besides two others who frequently bring a weekly supply of animal food from other parishes. From all these changes it may be inferred that the comforts, especially of the labouring classes, are much greater than they were in former times ; and there is great reason to believe that the sober and industrious portion of the community enjoy, upon the whole, a higher degree of comfort and contentment. In as far as the agricultural population is concerned, this certainly is the case ; but the operatives, who, comparatively, are but very few in this district, are generally of a more turbulent, talking, and discontented disposition. The working dress of labourers and mechanics is warm and substantial, and commonly consists of woollen or cotton cloth ; and, although the fabrics are not fine, they are suitable to their various employments. On Sabbath and market days, their dress is little inferior to that of the higher classes. With a very few exceptions, as already noticed, the people in regard to their moral conduct are deserving of the highest commendation ; and to their credit it may be observed, that such practices as poaching and pawn-broking, till within perhaps the last two years, were entirely unknown.

## V. INDUSTRY.

*Agriculture.*—The extent of this parish is considerable, and its boundaries are very irregular. Mr James Knox, who, some years ago, published an excellent map of the county of Mid-Lothian, has obligingly favoured the writer with an accurate statement of the number of imperial acres which the parish contains. He calculates that, on the north of a line due east and west, passing through Westfield, there are 4,815 imperial acres ; and on the south of said line, 7,524 ; making in all, 12,339 imperial acres. The proportion of arable to pasture lands, may be nearly as one to two. The farmers and proprietors are yearly reducing the quantity of uncultivated and mossy land ; and, by this means, are profitably increasing both their tillage and their pasture fields. There is no undivided common belonging to this parish, although the sheep-farms have but few subdivisions, being mostly surrounded only with a ring fence. Excepting Calder-wood, there is no copse or natural wood, but the whole extent of land under planting will be considerably above 200 acres. The trees are chiefly of the fir tribe, including also a mixture of ash, plane, elm, beech, and oak, &c., as already noticed ; and, in the management of these plantations, the proprietors generally err, by not thinning and pruning them in proper time ; but this is no doubt of less importance in strips, which are intended chiefly for ornament and shelter.

The best arable land in the lower districts, lets at from 40s. to 50s. per acre ; the outfield in the higher grounds, if arable, from 10s. to 15s.

The grazing of a milch-cow, in the richest pasture near the village, costs from £4 to £5, and varies according to the nature of the season, and the letting of the field, which is generally disposed of by public auction.

*Price of Farm Labour.*—A ploughman lives in his own house rent free, and receives two pecks of oatmeal weekly, at 8 lb. per peck, besides his breakfast and dinner for a month in harvest, with his coals, about four cart loads, at 18 cwt. each, cartage free; also three bolls of potatoes, and £15 or £16 in money; but, if his wages be paid wholly in cash, they will amount to about £26 per annum. Principal servants, who have any extra charge, sometimes receive two or three pounds more. Women-servants, fit for all farm and household work, have generally £6, or some of the very best hands, £7 per annum, and boys receive in proportion to their ability. The women and boys always live in the family. Day labourers have 1s. 6d. a-day in winter, and 1s. 8d. in summer, and women employed in the field 10d. a-day, without board. The employers always give them their maintenance in harvest, and the wages are regulated by the market, and are generally from 9d. to 1s. 6d., and sometimes so high as 2s. The men often prefer work by the piece, and corn is cut at 10s. and 12s. per acre, and potatoes are taken up at 1s. a boll of four cwt. Hay is cut at 2s. 6d. to 4s. an acre, according as the crop is heavy or light, and turnips, potatoes, and other drill crops are sometimes hoed by the piece, although this is but seldom, lest they should not be done in a proper manner. A pair of horses are shod, and a plough and grape kept in proper order, for from 50s. to 60s. per annum, when the smith furnishes the iron. A new shoe to a horse costs 9d., when furnished and put on by the smith. Coarse work, in general, is charged at 4d., and fine at 5d. per lb.

Labourers in summer begin their work at six in the morning, and end at six in the evening, and at sunrise and sunset in winter; but those servants that are hired by the year, begin and end at such times as suit the master's convenience, which in general is much the same. Women-servants in a family are employed for the most part, in some way or other, for at least fifteen hours a-day. Reaping is generally performed by the sickle; but the scythe, of late years, is becoming more common. Most of the reapers formerly were from the Highlands, but now they are almost all Irish. Harvest wages are always higher here than in the earlier districts, and vary according to the demand. For breakfast the reapers have about two quarts of oatmeal porridge, with half-a-bottle of butter milk, and the same for supper, and for dinner a twopenny loaf of bread, and a bottle of beer. They work from six to six, and are allowed two hours for rest through the day, and lie in barns on straw, with a few blankets. One man binds to six shearers, who usually cut down about a Scotch acre and a half a-day. Young men from sixteen to twenty, receive from £4 to £6 of wages half-yearly, with a cart of coals, equal to 10s. or 11s., in lieu of washing, besides their board and lodging. Masons' wages vary in proportion to the demand, and generally run from 15s. to 18s. a week during the summer season. Carpenters are nearly the same. Smiths' work depends in a great measure upon the price of iron. The price of provisions rises and falls according to the nature of the seasons, and the failure or abundance of the crop. The quartern loaf, which weighs four pounds, was



sold a few months ago at 5d., and is now 9d.; a peck of oatmeal of seven pounds, which last year cost 1s., is now from 11d. to 13d. according to the quality; beef and mutton, per pound of sixteen ounces, are 5½d. to 7d., and butter 10d. and 11d.; eggs are from 6d. to 1s. per dozen, according to the season; chickens from 1s. 6d. to 2s.; and fowls from 2s. 6d. to 3s. 6d. a pair; and other articles in proportion.

This parish has not been hitherto distinguished for any particular breed either of sheep or cattle, excepting in the dairy farms, in which the Ayrshire, or a cross with the Ayrshire cows, are generally most esteemed. As the farmers rely chiefly for payment of their rents on the dairy produce, the general character of the husbandry pursued has not been, perhaps, so minutely attended to as in those places where they depend entirely upon the cultivation of grain.

Since the publication of the last Statistical Account of this parish, in 1793, many important changes have taken place in practical farming and household economy. A better doctrine now prevails in the choice of seed and the rotation of crops. The attention of agriculturists in this district has been chiefly directed to the dairy system. The dairy culture has been peculiarly advantageous, both for a quick return of ready money for rent, and for enriching the land by means of an abundant supply of valuable manure for such green crops as are necessary for winter food. Turnips and potatoes, therefore, are largely cultivated for this purpose. The Swedes are commonly sown about the end of May, and come in for food about the end of next spring, or beginning of summer, after every other species of food is exhausted. The other kinds of turnips require to be sown about the second or third week of June. If earlier sown, they are found to mildew, or else run to seed if the season be dry; but, in ordinary seasons, turnips make the greatest progress in September and October. From the 1st to the 15th of May is accounted the best season for planting potatoes, there being, at that time, a sufficient degree of moisture in the ground to encourage an early vegetation. It has been doubted by some practical farmers in this country, whether keeping milch-cows, fattening cattle, or fattening sheep be the most profitable. In favour of milch-cows it may be observed, that, as the produce of the dairy is never equal to the demand, the market is less fluctuating. The dairy farmer has more leisure also to attend to his farm, and has no occasion to spend his money and his time at the country markets; and milch-cows, properly fed and littered, produce the greatest quantity of good manure so necessary for the improvement of the land. In the reclaiming of waste land, little comparatively has been accomplished by either landlord or tenants, when compared with what has been done in some other places. In thorough draining and deep ploughing, very little has hitherto been effected; but, as the attention of both proprietors and tenants has lately begun to be directed to the great advantages arising from such obvious improvements, there can be no doubt but there will soon be in both of these an extensive and rapid advancement. No effort has ever been made to reclaim waste lands by irrigation, nor has any embankment been attempted, although the low grounds on the sides of the various streams have occasionally sustained some trifling damage. The general duration of leases for extensive farms is nineteen years. This has been considered most favourable both for landlord and tenant. Rents

are chiefly paid in money, excepting in one or two instances in which they are paid partly in grain and partly in money. Grain rents, however, have not been found suitable for this climate, especially in the higher districts, because the tenant has always an inferior and diminished crop in the season in which the grain is scarce and dearest. Most of the farm buildings are very substantial; and, in those lately erected, elegance as well as convenience has been an object of attention. The fences consist chiefly of hawthorn hedges, in low situations; and, to keep them in proper repair, the landlord usually pays the one half of the expense, and the tenant the other. Moorland farms that are chiefly pastured with sheep, are enclosed with a dry stone dyke or wall.

As proprietors seldom give any assistance to their tenants in draining their close-bottomed lands, this circumstance, more than want of capital, has hitherto obstructed such obvious improvements. The heavy expenses necessary to be incurred, together with the hazard of not being remunerated, is the chief obstacle which deters them from these expensive and laborious operations. Besides, as the tenants trust chiefly to the dairy produce for payment of their rents, the operation of thorough-draining every field is not so necessary as if they depended solely upon the cultivation of grain. A new practice has lately been introduced into the dairy farms in this neighbourhood, known in Lanarkshire, from which it has been imported, by the term *boeing*. The tenant lets the produce of his cows at a certain sum per annum, and he binds himself to furnish them with a sufficient supply of pasture grass, tares, and clover in summer; and, in winter, each cow is allowed one load of pease or bean meal weighing 280 imperial pounds, four tons yellow turnips, fifty stons rye-grass hay, tron weight, with a sufficient quantity of straw. The person who receives the produce pays, for the use of each cow, from £6 to £12 according to the quality of the cow, the convenience of the situation, and the richness of the pasturage; and the manure belongs to the tenant who lets out the cows. In rich pasture, a good cow should produce twenty stons of sweet-milk cheese, tron weight, which generally sells from 6d. to 8d. per lb. when of sufficient age and ripeness for the market; so that the average produce of a first-rate cow, exclusive of manure, may be worth from £10 to £12; but, in a dairy of twelve or fifteen cows, the produce may average from £8 to £10.

It is scarcely possible to put an accurate estimate upon the gross amount of raw produce raised in the parish, as the most of it is generally consumed by the cultivators themselves, and by their domestic animals. Perhaps a few hundred bolls of grain, including wheat, barley, and oats, may comprehend all that is disposed of by the farmers, together with two or three thousand stons of rye-grass hay. For dairy purposes, the cultivation of potatoes and turnips is very extensive; but cabbages, beet-root, rutabago, and carrots, are seldom raised in the fields for winter feeding. The sheep-farmers in the more elevated districts generally secure a little meadow hay for the use of sheep; but it is rarely cultivated for any other purpose. At one period it was customary both for farmers and cotters to sow flax sufficient for their own use; but since cotton cloth of all kinds has become so low in price, the cultivation of flax has been entirely abandoned. The produce of the gardens and orchards is generally consumed by the

families to which they belong ; and there is no branch of manufacture of any kind in this parish, if we except that of pasteboard already mentioned ; nor is there any association of any kind for the encouragement of industry.

## VI. PAROCHIAL ECONOMY.

In the town of Mid-Calder we have no weekly market, the shops being adequate for the supply of all necessary provisions. The market town to which all classes resort, and particularly the farmers on a Wednesday, is Edinburgh, which is distant twelve miles. Few from this quarter attend the market at Bathgate, although it is only seven miles distant ; nor do any attend the Linlithgow market, which is only two miles farther. There is no trade carried on here. Formerly a few weavers found employment, and had abundance of work ; but of late this occupation has entirely failed ; and, excepting for tailors, carpenters, smiths, masons, and labourers, it may be said that there is no regular employment.

The want of an *established police* in this place is a very great inconvenience, as the disorderly conduct of vagrants is often very annoying to the more respectable inhabitants. Mid-Calder being the line of the great thoroughfare between Edinburgh and the populous towns of Glasgow, Ayr, Hamilton, and Lanark, a vast number of idle, disorderly characters frequently meet here and commit depredations ; and, as the public houses and dram shops are numerous, they very frequently get intoxicated and disturb the peace of society. This neighbourhood, also, is much molested with swarms of gipsies or *tinkers*, who generally pitch their tents on the sides of the by-roads, and live upon what they can beg, borrow, or steal. They usually forage through the night, and sleep through the day, cut young trees and willows, and often break down the wood of the adjoining fences for firing ; and, being capital pedestrians and very sharp-sighted, they molest the whole neighbourhood around for many miles.

Bellsquarry, which may be considered as the only other village in the parish, is distant about two miles westward of Mid-Calder. Its inhabitants are chiefly labourers and mechanics ; and, along with the other neighbouring cottagers, they enjoy the benefit of a good English school. The people of this parish possess ample means of communication with other places, being well accommodated with excellent roads in all directions. The turnpike and parish roads have been advancing in steady and constant improvement for the last forty years. The roads from Edinburgh to Glasgow, Lanark, Ayr, and Hamilton, which all pass through the village and parish of Mid-Calder, run about two and a half miles each in a direction from east to west. Another turnpike road takes a northerly direction about a mile and a half towards Uphall and Linlithgow. Not many years ago, a new line of road was projected by the late Lord Hermand, between Edinburgh and Lanark, considerably south of the present road through Mid-Calder. It was intended to pass in a direct line from East-Calder by Langholm Mill and Balgreen to Wilsontown, and it would thus have opened a nearer, a better, and more level line than either of the

present roads by Carnwath or Mid-Calder, and would have afforded a much easier communication to many places in a district to which the access has hitherto been very inconvenient. To several of the proprietors, both in Mid and West-Calder, this would have been an immense advantage, and to the country in general a vast improvement. Besides the mail, there is a daily coach between Edinburgh and Glasgow, another between Edinburgh and Ayr, and, on every alternate day, there is one between Edinburgh and Hamilton; all of which pass through the village of Mid-Calder. On the south or Carnwath road is a daily coach from Edinburgh to Lanark during the summer months, and every alternate day in winter; and from Calder there is a weekly coach every Wednesday to Edinburgh.

In a place in which there is no trade, and but very little business of any kind, and where there are but few resident gentlemen's families excepting in summer or harvest, it is rather singular that we have a regular arrival and departure of the post twice every day. By an awkward arrangement the first letter-bag goes round by Uphall, by which means the distance is increased about four miles, and the postage costs an additional penny. The second bag comes by the mail-coach direct, and arrives at half past one, and departs at four. Uphall has a penny-post, although more distant from Edinburgh than Mid-Calder; so that our letters cost each 4½d. more than theirs. But this is not all the evil that has been complained of. The Kirknewton letter-bag is enclosed in that of Mid-Calder; and the former letters cost only a penny—ours, coming a shorter distance by the same conveyance, cost 5½d. A considerable saving might be effected, both to the people and the post-office, by a more judicious arrangement; and, as a petition has already been forwarded to the Post-Master General on the subject, some better regulation may *reasonably* be expected, if the contemplated reduction of the postage be carried into execution, which might easily be done without prejudice to the revenue, by charging 1d. for each letter sent, and the same when delivered.

The bridges in this parish may, in general, be considered as in a state of good repair. Of the three over the Almond Water, two are extremely narrow—the one near Calder, and the other near Livingstone; but the other, on the Glasgow road, near the Howden toll-bar, is of proper width and in excellent condition. It was built in 1764. The other bridge, near the junction of the Linhouse and Murieston Waters close to the village, is a handsome and substantial building, and was erected in 1794. The bridge at Camilty was lately built over the Linhouse Water, chiefly through the influence of Mr Young of Harburn, to whom, with the late Lord Hermand, this district is much indebted for many valuable improvements on the public roads. This bridge has been erected at a very considerable expense; and when the road in this direction is completed to the *Cauldstane Slap*, at the southern boundary of the parish, it will greatly facilitate the intercourse with our southern neighbours, and especially that of the English cattle-dealers with the northern markets, as it runs in the most direct line between Falkirk and the English Borders. As few individuals are particularly interested in this line of road, and as four or five miles of it are still in an unfinished and unformed state, it is much to be feared that there is little hope of this important improvement being soon completed.

Besides the bridges already noticed, there are various others of inferior note over smaller streams; but of all of them it may be said that they are at present in excellent condition.

*Ecclesiastical State.*—The church of Mid-Calder is situated near the north-east boundary of the parish, close to the village, and within a quarter of a mile of the parish of East-Calder, which was formerly included in that of Mid-Calder. This may account for the present position of the church, which cannot be less than from seven to eight miles distant from the most remote house in the upper or pastoral district of the parish; but, considering the state of the population, this, after all, is the best situation, as it is nearest and most convenient for the great bulk of the inhabitants. The church is in good repair; but the exact period of its erection cannot be ascertained. It contains 438 sitters, at eighteen inches each, but may easily accommodate 100, or perhaps 150 more, including young and old, without being much over-crowded. As the population, therefore, in 1837, amounted to 1369, and the examinable persons to 1006, two-thirds of these requiring church accommodation will be 670, which would leave a deficiency of 232 sitters for the present population. About two-thirds of the table seats are considered as free, besides the back seats in the galleries, sufficient to accommodate, in all, about 100 sitters; but, although the present church be insufficient to accommodate the whole population, yet, under existing circumstances, there is no want of room for all who regularly attend it. Fully one-half of the whole tenantry who have taken leases, and now occupy farms in this parish, are Seceders, and several families who belong to the Establishment, being nearer to the parish churches of Livingstone and West Calder than their own, have always been accustomed to attend public worship at these places. A small number of the poorer families in the village also, seldom attend any place of worship, under the pretence of want of suitable clothing; so that, including these, and the number of servants necessarily detained at home in the management of large dairy farms, the church, though always well attended, in good weather, is never crowded, except during the time of the communion. The church has never been legally divided; but the heritors, at a meeting, by a written agreement, to which they adhibited their signatures, appropriated the seats according to their valuations, when it was new seated, 8th August 1768. This document was also signed by their preses, with reference to their sederunt of that date, the original plan and copy of which are laid up and may be found among Lord Torphichen's papers. Ever since patronage has become the law of the land, it has been exercised by the Torphichen family, in such a manner as has always given satisfaction to the parishioners, so that every clergyman presented to this benefice has uniformly met with the most cordial reception from the people. By the "Decreet of locality, 20th July 1647, the local stipend and provision of the Kirk of Calder Comitis, is found and declared to be 1200 merks, and 50 merks for communion elements, and a tack duty payable by Lord Torphichen, of £20 Scots, 4 kyne, and a horse's grass in the wood of Calder, together with the manse and glebe." In 1743, James, Lord Torphichen brought a process of *reduction of the decreet*, against the heritors, in so far as it could import a valuation of the teinds, in

exclusion of the *titular*; but the Lords repelled the reasons of reduction, and assoilized the defenders. The access to the pasturage in the wood of Calder being found not only extremely inconvenient in crossing the water in time of flood, but sometimes even dangerous, this servitude was afterwards exchanged for an additional piece of land, which, being added to the glebe, made the whole extend to eight acres. In 1806, these eight acres were given in exchange for forty-three acres and one rood of land, of a quality proportionably inferior, and situated about three quarters of a mile west of the village, and in 1807, the present manse and offices were erected on the new glebe. When land was at its highest value in 1806, the ground of the present glebe was estimated at £1 : 6s. per acre, and a small part of the old glebe, about half an acre being let as garden-ground, was valued at £8 : 8s., the rest of it at £5 : 5s. per acre; and to this was added an additional allowance for removing the glebe at so inconvenient a distance from the manse and village. This exchange led to many improvements, and was the occasion of very considerable expenses to both parties. It greatly added to the beauty of the access to Calder House, and in time, will add to the value of the glebe to future incumbents. The approach to Calder House now runs along a beautiful bank through the old glebe, which has been greatly ornamented by planting. Considerable sums have also been laid out on the new glebe, which is now let at 30s. per acre, exclusive of the roads and strips of planting. It has been subdivided into ten enclosures, and several fields have been wedge drained; but there being no access to stones or gravel, except at a distance, or through a toll bar, the improvements in this way are but limited. The period at which the exchange of the pasturage in the wood took place, is not mentioned, but it must have been since the date of the original decret and valuation. The whole teind of the parish, which was valued in 1647, at that time amounted only to 1250 merks, or £69 : 8 : 10<sup>s</sup>, from which, after deducting £8 : 6 : 8, the legal allowance for communion elements, there remains of free teind only £61 : 2 : 2<sup>s</sup>; but, by the Government bounty, the minister receives £88 : 17 : 10 sterling per annum, to make up his stipend, in terms of the late Act of Parliament, to £150, besides the £8 : 6 : 8, for communion elements. The £10,000 granted by Government, to make up the incomes of the clergy of small stipends in Scotland, to £150 per annum, ought to be considered as paid out of the bishops' rents and teinds, because these were first annexed to the crown, and afterwards transferred to the consolidated fund, or public revenue of the country. Although there was no free teind in this parish, the heritors, in 1805, with the exception of two or three, presented the present incumbent with a bond for a voluntary augmentation of one-half more than the stipend they were legally bound to pay. For this altogether unmerited and unexpected token of their kindness, he now begs to offer them his most grateful acknowledgments, and to say that the impression it has made on his memory can never be effaced. Since this voluntary augmentation, however, has been granted, many of the properties in the parish have passed into other hands, by which means a considerable portion of it has been lost, as he has never insisted for payment of it from the heirs of those individuals who signed the original bond, after they

had ceased to hold their property in the parish. This voluntary augmentation amounted last year only to £18:17:6½; so that, exclusive of the communion elements, and calculating the *glebe* at £1:10s. per acre, at which it is now let, the whole emoluments of the living, will amount to fully £230 per annum to the present incumbent. It may be observed, however, that, till within these three or four years, the necessary improvements on the glebe have been a source of very heavy expenses.

There is one Seceding meeting-house or chapel in this parish, which was erected in 1765. It is beautifully situated on the north bank of the Almond Water, near the village, and can accommodate nearly 400 sitters. About ninety seats are let to the people of this parish, including those occupied by paupers, which are paid out of their session funds. Between seventy and eighty of the communicants belong to this parish, and the other members are from the neighbouring districts. The emoluments amount to £100, arising from seat-rents and collections, with a house and garden, and a little more than two acres of land for a glebe. Besides this, the present minister, the Rev. Alexander Duncan, has a salary of £50, as Professor of Pastoral Theology and Ecclesiastical History; and, during the discharge of the duties of this office, he resides in Edinburgh for the two months of August and September, teaching four hours every lawful day, Saturday excepted, and the number of students attending his class is about seventy. The theological institution of the United Secession Church, consists of four departments, which accounts for the smallness of the salary, amounting to no more than £100, even when there are only two professors. Mr Duncan's congregation here, were originally Antiburghers, and are now denominated the *United Associate Synod of the Secession Church*. Besides those who occupy seats in his meeting-house, fifty other individuals of this parish have seats in the meeting-house at West-Calder, and forty-four at East-Calder; but it is understood that several people of the Established Church, have taken seats, who never attend. There are only two Episcopal, and one Catholic family in this parish. The number of communicants in the Established Church, is from 340 to 400. A Bible Society was established in this village by the Seceders, many years ago, and for a considerable period they were accustomed to collect from £20 to £30 per annum, and one year their contributions exceeded £50; but it is now dissolved, owing to the *Apocrypha dispute*, and because *collections of a similar kind* have been appointed throughout the whole of Scotland, by order of the General Assembly. The collections at the church door, as already stated, amount to about £28 per annum, besides contributions for the Highland schools, Church extension, Indian missions, and Propagation of the Gospel in foreign parts. Other collections are also called for occasionally, such as for the poor in Ireland; in the Highlands; for the operatives during the stagnation of trade; for the Infirmary, and for various other purposes.

*Education.*—Besides the parochial, there are six day and three evening schools, in the parish; and the number of scholars at each is as under:—

Children attending the Parochial School,	96
Winter, Evening School,	18
Female School,	46
Another Female School,	34
Another of very young children,	10
Bellsquarry School,	50
Berryhill School,	50
Harrysmuir School,	19
Inveralmond Evening School,	9
Evening Female School,	3
Total number,	335

Of this number, forty-two come from the adjoining parishes, and about seven or eight go from this parish to the neighbouring schools ; so that the number of scholars that have been for some months under a course of instruction, in the parish, during this year, may be fairly estimated at 300, which is more than the fifth of the population. One of the female schools is supported partly by subscription ; but all the rest, excepting the parish school, are on the teacher's own adventure. The children in all those schools are instructed in the common branches of education ; and in the female schools they are also taught needle-work and knitting.

In addition to the common branches, the parish schoolmaster teaches Latin, Greek, French, Practical Mathematics, Algebra, Mechanics, also Ancient and Modern Geography, and Church Music ; and for the last, receives the sum of £11 : 2 : 2½ per annum, arising from money mortgaged on the lands of the barony of Calder, by a person of the name of Moodie, who was a *cadger* or carrier of eggs and poultry to Edinburgh, during the time of the plague. Having escaped the infection, he amassed a considerable fortune, and left a sum of money for the support of our parish school, besides other property. The tradition is perhaps too absurd to be inserted here. When travelling along, musing how he would dispose of his money, most of which he had obtained by the sale of poultry, his attention was suddenly attracted by a cock which stood on the top of a wall near the place where he was passing. This *sagacious monitor*, after clapping his wings, and crowing three times, seemed to him to say—

“ Buy Saughtonhaw,  
Dedrigburn and aw.”

The superstitious carrier accordingly made a purchase of both, and left the above sum of 4000 merks Scots, or £11 : 2 : 2½, secured on the lands of Dedrigburn, for the benefit of the schoolmaster of Mid-Calder, for teaching Church Music. The patrons and managers of this mortification were “ Lord Torphichen, Sir Alexander Maxwell of Saughtonhall, afterwards of Calderwood, with one or two of the ministers of Edinburgh, at the time, who have a right to present a person fit to teach the four parts of grammar, and art of music, or, at least, should be obliged to keep a doctor, for teaching the music art,” as the said deed of mortification more fully bears. This deed also bears, that he is to enjoy and uplift every other casualty and privilege, as also to possess the dwelling-house there built for the use of the schoolmaster, he always teaching in manner as before stated. When



any vacancy of the office of schoolmaster occurs, the successor requires to be presented to the situation by the patrons above-mentioned in due form. The maximum salary payable to the schoolmaster, therefore, is £34:4:4½, which, with £1:6:8 for deficiency of garden-ground, makes

	£35	11	0½
Add the 4000 merks for teaching music,	11	2	2½
Registration fees, and proclamation of banns, calculated at	8	8	0
Allowance for presenting and distributing poor's funds,			
at £5 each,	10	0	0
Fees for Session-clerk, £3:8s., and for Heritor's clerk, £2:2s.,	5	10	0
Taking the average school fees for the last four years, at	65	0	0

Total income, . . . £135 11 3

besides an excellent house, garden, and offices, with the advantage arising from boarders, and the chance of occasional private teaching, and an evening school. The whole emoluments, therefore, to a good and active teacher, may be estimated at £160 or £180 per annum. There are few parish schools that offer so much encouragement. The school-house was built in 1782, and is in good repair. The present schoolmaster, however, having retired upon £28 of the salary, 'has resigned the whole of the other emoluments, together with the house and garden, to the present teacher.

All the children in the parish, from six years and upwards, can read and write, with the exception of three families, who refuse either to attend public worship themselves, or, from a perverse obstinacy, refuse to send their children to school, even to be educated gratis.

After leaving the school, however, many of the children, from want of practice, soon forget what they have learned in writing and arithmetic, and in a few years, can do little more than sign their names. The people, in general, are nevertheless much impressed with a sense of the benefits of education, and are eager to avail themselves of these advantages; and, during the last forty years, as already stated, they are generally much improved, both in their manners and morals, owing to the facilities of education which they have long enjoyed. Many of the children formerly left the school during the summer months, but almost all of them now attend regularly throughout the year. At one period, the parents were extremely jealous of the schoolmaster raising the school fees; and, to gratify them, the heritors fixed the fees at two rates, so that parents might have a choice of the old or new plan of teaching. Several chose the old plan at first, but soon found that the new one was by far the best, and, on the whole, the cheapest. In September 1830, the heritors fixed the fees for teaching the different branches of education as follows:—

	<i>Per Quarter.</i>
Reading English alone,	£0 2 0
English and Writing,	0 3 0
English, Writing, and Arithmetic,	0 4 0
Geography alone,	0 5 0
English, Writing, Arithmetic, and Latin,	0 5 0
French alone,	0 7 6
Practical Mathematics,	1 1 0
Book-Keeping complete,	1 1 0

Those taught according to the New Plan, will pay as under :—

	Per Quarter.
Reading, English, and Spelling, with Church Music, Geography, History, and General Knowledge, the Meaning of particular words and phrases, with English Grammar,	£0 3 0
Writing, and the above,	0 4 0
Writing and Arithmetic on the Board, Mental Calculations, Writing to Dictation, and correcting the same,	0 5 0
Latin, Greek, or French, and all the above,	0 7 6
Practical Geometry, Trigonometry, Mensuration of Surfaces and Solids, Land-Surveying, Navigation, and Algebra, and any part of Practical Mathematics, each,	0 7 6
Book-keeping complete,	1 1 0

Children who pay the above fees, are to pay no Candlemas offering, and parents who send more than two children, shall pay 6d. less per quarter for all above that number. Those who have more children than one at school, and may be unable to pay the full fees, shall have them reduced by applying to the minister and elders, who are authorized to make up the deficiency out of the funds in their hands. Globes and maps for the use of the school will be furnished gratis. Books and writing materials will also be furnished by the master at least one-fourth below the regular booksellers' price, by orders from the minister. All the children above six years of age are to attend the Sabbath School, to be instructed by the master in the knowledge of the Scriptures, gratis. The school fees are all to be paid in advance, by order of the heritors.

Parents, whose children attend the Parish School, are requested to observe the following Rules :—

1. To be punctual in sending their children to school at the school hours, and on no pretence whatever to keep them at home, except in cases of sickness.
2. To send their children very clean, both in their persons and clothes, and to keep them in proper order when they are at home by good example and admonition.
3. To teach their children their catechism and hymns at home, and cause them to read the Holy Scriptures, especially on the Lord's Day, and use prayers in their families, so that both children and parents may be better informed of their duty, and, by a constant and sincere practice thereof, procure the blessing of God upon them.
4. To cause their children attend the Church every Sabbath, also the Sabbath School, and to take notice of their behaviour both during Divine service, and at home.

*Literature.*—There is only one circulating library in the parish, of a very inferior description, consisting of a few obscure writers in divinity, and some old magazines and novels. A subscription library was some years ago established in the village, in which was to be found most of the best periodicals, with a few travels and voyages of modern times. This, however, has partly been discontinued. We have no scientific, literary, or antiquarian societies, nor any school of arts, or mechanical institution, nor any public reading-room.

The only friendly society, or charitable institution in the parish, at

present, is the Mason's Lodge, consisting of 160 members. The funds amount to £370, and they give out to sick members six shillings a week, and allow five guineas to each member towards the expenses of their funeral. This charitable institution has existed for eighteen years, and is composed of members from different parishes, and is still in a flourishing condition. About fifteen or twenty years ago, several friendly societies were established here for the benefit of the labouring classes, and, although these were indisputably of great advantage, and some of the members, in time of sickness, received upwards of £30, yet, by the clamour of a few demagogues, who made the contributors believe that the Government was to seize upon their money, these excellent institutions were brought into disrepute, and the funds were distributed amongst the survivors. The Savings Bank nearest to this place, is in Edinburgh. A branch of the National Security's Saving Bank, sanctioned by Act of Parliament, has been attempted to be established here, and a few have availed themselves of the opportunity of making some small deposits; but most of the individuals prefer the Edinburgh Bank, not wishing their savings to be known.

*Poor and Parochial Funds.*—The list of paupers upon the roll varies much according to circumstances. About 100 years ago, the number of poor, as appears from the books of deaconry, generally ranged from eight to twelve. In 1757, and 1758, it varied from fifteen to twenty, besides paupers not upon the regular roll. Within these few years, those who were enrolled as permanent paupers amounted for a short time, only to three, but besides these, several others received occasional relief. In the course of the last ten or twelve years, many of the lower classes have lost much of that noble spirit of independence for which their fathers were so eminently distinguished, although there are others who, when reduced almost to the brink of despair, would scorn to utter a single complaint, and who would be unwilling to have it even supposed that they felt in any degree the pressure of poverty. Instances, however, have lately occurred where children, although able, were unwilling to support their aged parents, and who have absolutely refused to do so from the mistaken notion that the heritors were bound to relieve them of this burden. In the distribution of the poor's money, it appears that, after prayers, the box with the two keys was opened, when a list of the poor was taken up, and they received their supply in proportion to their several necessities; and the names of each, and the sums they received, were put in the record. In this book of deaconry, therefore, which has been carefully preserved, there is an exact account of all the money that has been distributed to the poor of this parish, from the 25th day of October 1691, up to this present date, with the different sources from which these funds have been obtained. By those in the higher ranks, donations were given in these times to the poor, on occasion of their marriages, and also at funerals; and, besides the mortcloth, there was an additional charge at funerals for tolling the bell. Not only were the wants of the poor thus amply supplied, but various sums were also given out of the poor's box for several other purposes, such as the support of Presbytery, and other bursers. By orders of the Privy Council, contributions were also made for behoof of poor students of philosophy and theology. Small sums were likewise given to poor people from other parishes. Thus,

on "8th May 1692.—This day, given to a poor man, recommended by Mr Low as an honest man, who was spoiled of his goods by the Highlanders, £2 Scots;" and, "28th August—Given to Elizabeth Peebles, a minister's daughter, having a certificate, signed by several ministers in Ireland, fourteen shillings." Many other collections were also made for various other purposes, such as relieving two men belonging to Borrowstownness now taken by the Turks; and, "On 13th January 1695—This day an act emitted by the Privy Council, was read in favour of the Laird of Kinkell, in Fife, ordaining a contribution next Lord's day for the said Kinkell." It is difficult to conjecture what could be the cause of this contribution, unless it may have been that he was spoiled of his goods by the public enemy. In the session record, is the following entry. "Upon the nynt and sixteen dayis of Junii 1633, thair was collectit in the Kirk of Calder, xxxv. lib. ten sh. quhillk was delyvrit to Mr James Ross, Minister at Leivingstoun, as ane help to the bigging of thair brig at Blackburn, over the Almond." And soon after this, another collection was made for the bridge of Barvie, and one for the harbour of South Queen's Ferry, and, in October 1719, the collection was given to the new erection of Livingstone. From the following minute of the Kirk Session, it appears, that the Episcopal clergy had officiated in the church of Mid-Calder, probably before the establishment of Presbyterianism in 1690. "30th June 1696—Item dispursed by John Dick, according to order, to psors. for pursuing Mr Robert Hendry for the session books in his hands, for defending the session against his malicious proces, for alleged fees due unto him when he was session clerk here to the Episcopal incumbent, 4 Rix Dollars, £11, 12 sh. Scots." In March, 1698, it is stated, that William Laurey, and John Aikman, paupers, got nothing this day, because it is reported that they *keep not the church*. It appears that, in 1699, the session was much annoyed with *uncurrent cliptmoney*, which they sold by weight, fifteen ounces of which were equal to £45 Scots; and, in 1707, it is stated that, they exchanged some Scots money for a bank note, because of the union of the two kingdoms. On the 3d June 1708, a thanksgiving was held on the account of the English fleet, "thus defeating a French fleet that came to the Scots seas with the pretended Prince of Wales, to invade Britain."

In October 1692, is the following entry. "Item to John Pollock, in Elder-toun, for his service at the building of the meeting-house, £2 Scots." Again, in "Feb. 1694. This day the minr. and elders having met, appointed to give the hundred merks that was gotten for the timber of the meeting-house to Mistress Johnston in Caldertown, upon her bond." It is difficult to say what this meeting-house was, unless we suppose that it was a chapel or house built for the private accommodation of Presbyterians during the time that the Episcopal clergy were in possession of the churches. In February 1687, after recommending to his council to root out the field conventicles with all the severity of the laws, and the most rigorous prosecution by the forces, James, by his sovereign authority and absolute power, granted a toleration to moderate Presbyterians to meet in their private houses, and hear such ministers as accepted the indulgence, if they did nothing treasonable or contrary to the peace of his reign. This same year, he caused his council to proclaim this indulgence a third time, declaring

his protection of the Bishops, &c., in the free exercise of their religion, and, allowing his subjects to meet and worship God in their own way, in private houses, or chapels, or places hired and built for this purpose, provided the sheriffs were informed of such houses, and the names of the preachers, and nothing taught which could tend to alienate the subjects from him or his government; but commanding the judges, magistrates, and officers of the army, to prevent all such as were guilty of preaching at or attending *field conventicles*. On this, the Scotch ministers who had been banished, or had retired to other countries, returned home and preached in private houses and chapels. It is not improbable, therefore, that the timber which was sold in 1694, may have been the roofing and seats of the meeting-house at Chapelton, near West-Calder, which was disposed of for the benefit of the poor, after the ministers were restored to the possession of their churches, at the re-establishment of Presbytery in 1690. What gives some colour to this supposition is, a contribution given, 13th January 1695, collected £3 : 13 : 4. "Whereof, given to Richard Hamilton, mason in West-Calder, £3 : 10s., as that which was agreed upon betwixt this session and the session of West-Calder, to be given to him in contentation for his work at the meeting-house."

The distribution of the poor's funds, in those days, was not fixed to any regular period, but was at intervals, sometimes more and sometimes less than two months, and, whenever the distribution took place, it was by the minister and elders, in a regular constituted meeting of the kirk-session. From the above, we may form a pretty correct opinion in regard to the administration of the poor's funds; and so many particulars regarding the mode of distribution would not have been noticed here, were it not that they are calculated to throw considerable light on the ancient plan adopted for the management of the parochial contributions during the early history of our Established Church. As at this time there were no Seceders or Dissenters, it may be presumed that each of the parishioners contributed according to their respective abilities or inclination. The administration of the funds at present, takes place on the first Sabbath of every month, in the session-house, immediately after sermon, in presence of the minister and elders, although the session is not constituted. The collection is received every Sabbath, at the entrance into the church gate, in presence of the elders. It is then locked up and counted after sermon, when the sum is marked by the minister, or one of the elders, in a small book kept by the session clerk for this purpose; and these sums are afterwards recorded in the book of deaconry. The money is then given to the treasurer, who must account for it by producing proper vouchers, excepting for such sums as are distributed or paid in presence of the session. This book, which is kept by the session-clerk, is audited generally once a-year by a committee of heritors and the minister.

It appears from the records of our early church, that thanksgiving and fast days were much more frequent than at present. Thus, 12th June 1692, a proclamation was made, enjoining all persons to the solemn observance of a thanksgiving day on Tuesday, 14th, following. A thanksgiving was also appointed on the 26th of the same month, and a fast next Wednesday, 29th, besides a monthly fast, intimated to be held on 27th July. But, on the other hand, it must be observed that

the minister was called upon to be frequently absent from his parish for several weeks together. Thus, 26th February 1693, there is the following entry—"No sermon here, the minister being appointed by the General Assembly to go to Aberdeen, and there to continue for six weeks time with other ministers." During his absence, sermon was supplied to his people once a fortnight by other neighbouring clergy. Owing to the great number of vacant churches, and the scarcity of ministers at that time, the congregation here was seldom supplied in summer with public worship oftener than once every two weeks, and hence the great encouragement that was given, and exertions that were used to assist young men to enter into the ministry in order to supply these vacant charges.

At present there are ten paupers receiving parochial relief, each of whom are allowed, at an average, about a shilling weekly. In addition to these, a few others receive occasional assistance, which is generally laid out in the purchase of fuel and payment of house-rents. For some years past, however, many children count it no reproach to have their parent's names placed upon the parish roll, so that the number and expense of the poor has been gradually increasing. In 1833, the amount of distribution was £63:10:3½; in 1834, it was £82:4:11; in 1835, it was £68:5:1; and, in 1836, it was £71:18:1. In these sums are included the Presbytery, Synod, and Session clerks', and Presbytery officer's fees, together with £5 allowed by the heritors to the schoolmaster, for trouble in distributing the poor's funds, and keeping the books, besides other small charges to the beadle for extra trouble at the dispensation of the Sacrament, medicines for the poor, relief given to sick travellers, and various other items, which, taken together, may amount to about £12 per annum. The surgeon gives his trouble and advice to the poor gratis, and charges only for the expense of his medicines. Our collections at the church door may average from £28 to £30 per annum, and may be considered chiefly as the contributions of the tenants who attend the Established Church, and a few of the better class of labourers, as of late we have no resident heritors, excepting for a few months in summer and harvest. The poor have now no income from hearse or mortcloth dues, nor for seat-rents or fines, which at one time amounted to about £20 per annum. Formerly the poor derived a considerable revenue from these sources, and also from friendly societies; but with the exception of the Whipmen or Ploughmen's Society in Kirknewton, and the benefit society connected with the Masons' Lodge, as already noticed, they have no regular means of support, but the collections at the church doors; and even these, of late years, are greatly diminished. Besides, fully one half of the farms in the parish have now come into the hands of Seceders, who contribute nothing, and who do not consider themselves bound to contribute any thing for this purpose. The tenants who formerly occupied these farms belonged almost wholly to the Established Church; and, as they regularly attended divine ordinances on Sabbath, their contributions considerably increased the revenue for the poor. All the poor also belonging to the Secession, are now thrown back on the parish funds for their support, and receive not a shilling from them, excepting on *very rare occasions*. Formerly it was understood that whatever sum was given by the Secession to their own poor,

they received the same from the funds of the Established Church ; but the Seceders now hold what is perfectly correct, that paupers of all denominations in the parish have a legal claim to support from the parish funds. This, no doubt, is a hardship on those of the Establishment, and it admits of no remedy but one, which would occasion perhaps a still greater evil—namely, a *compulsory assessment*. At all times, a considerable portion of those upon the roll of paupers belong to the Secession ; and, in the distribution of our funds, no distinction has hitherto been made between them and those of the Established Church. This hardship might be avoided, by having recourse to a *compulsory assessment* ; but this would tend rather to increase than diminish the evil, by greatly increasing the number of the poor, as has been found by experience in many parishes in Scotland. Although the church collections may be considered as the only funds destined for the relief of the parish poor, there never yet has been more than one, or at most two, compulsory assessments. For the last two or three years, the heritors have given a voluntary contribution, when the funds were exhausted, of twopence in the pound Scots of the valued rent, amounting to £43. Since the hearse was worn out, and the people shewed an unwillingness to use the mortcloth, or to pay for seat-rents, the necessary supplies were raised in the following manner :—When additional funds are required, the minister writes circular letters to all the heritors, intimating that the funds are exhausted ; and that, if no objections be stated by any heritor within fourteen days of that date, it will be presumed that his consent is given, authorizing the minister to collect twopence in the pound of the valued rent for behoof of the poor ; and the same intimation is again repeated when necessary. This year threepence in the pound of the valued rent has been required, owing to a lunatic pauper now boarded in the city bedlam. There are many who think that the poor ought to be supplied entirely out of the pockets of the heritors, and the collections at the church doors ; but persons who reflect upon the subject cannot fail to see, that the great duty of Christian charity is confined to no sect or party, being imperative on all ranks and conditions of persons who call themselves Christians ; that it cannot be shifted or devolved by one class or individual upon another ; and that if the heritors were to give ever so much, it is no good reason for preventing the poorest from casting in their two mites into the treasury also. Individuals who are connected with the parish, whatever be their religious creed, ought to contribute to the support of the poor, whether they be present in or absent from the Established Church. Where there is no *compulsory assessment*, giving a contribution elsewhere by the *non-resident heritors* and those who do not attend the parish church, can form no valid excuse for any one to omit a religious and moral duty, for the neglect of which the legislature has authorized a *compulsory assessment*. That the poor ought to be provided for, admits of no doubt whatever ; but a question arises, in what manner are the poor to be supplied with most advantage to themselves, and at the least expense to the parishioners ? It is clear that no individual ought to receive a shilling, if he can in any way earn it by his own industry. Every one must admit that charity given for nothing is a reward bestowed on sloth and indolence ; for where no man can perish for want, many will be idle. In the distribution of parish charity,

therefore, it is necessary to discover on how small a sum weekly any person can reasonably subsist; because whatever is given to a pauper beyond what is sufficient to support nature, must operate as an inducement to idleness. Hence, it is necessary to reduce the allowance to every pauper lower than what an industrious man or woman can earn in such circumstances, else the relief they receive will be no spur to industry or economy, both of which are requisite to make the poorest person live comfortably. What is given out of the parish funds is intended only as a *help*, and not as a *full supply*, excepting in cases of sickness. Every pauper of a respectable character receives some occasional help either from their relatives, friends, or neighbours, and most of them, although aged and infirm, can always earn something. There is scarcely one of them who does not receive occasionally some voluntary private charity, merely because it is understood that what they receive as paupers on the roll is *inadequate for their comfortable support*, and by this means their wants are generally better supplied than if they had received a more liberal allowance out of the parish funds. Besides, if they had received what was fully adequate for all their wants out of the parish funds, how great a number in every parish would then throw themselves upon the charity of the public? For these reasons, therefore, the Kirk-session, in admitting paupers on the roll, generally observe the following rules:—

1. Persons admitted on the regular poor's-roll must be destitute of funds of their own, and, from age or infirmity, be unable to gain a livelihood by their work—that is, *unable to earn 1s. 6d. a-week*; as there is every reason to believe that, in the great bulk of the country parishes in Scotland, the average expense of the poor does not exceed that sum. From the Assembly's report, it appears that the average expense of each pauper in Scotland, is little more than £3 per annum—that is, less than 1s. 6d. per week.

2. If the claimant be totally destitute himself, but have relations, either ascendants or descendants, in sufficient circumstances to aliment him, he can have no claim to relief out of the parish funds as a pauper.

3. To entitle any person to parochial relief, he must not only be destitute of funds of his own, and of relations bound to aliment him, but he must make over whatever furniture or property he may be possessed of to the Kirk-Session, for the benefit of the poor.

In this way, in all these cases in which the parish allowance may be considered inadequate, the deficiency is expected to be made up either by the industry of the paupers themselves, or by the private charity of their friends and neighbours. Besides the ordinary allowance, the poor of this parish generally receive from 15s. to 20s. in coals and other articles, and they seldom pay any house-rent.

There is another plan by which the poor might be maintained, in a way that would be less troublesome, and perhaps more beneficial. Each resident heritor, at the recommendation of the minister and kirk-session, might take charge of one pauper or poor family, and, in the case of non-residents, their tenants, who might afterwards be remunerated by their landlords. There are but few families of the better class who have not something to spare. In many cases, money is not what is chiefly wanted. Even sympathy and kindness very often are all that



would be required. Without much trouble, the master of a family might inquire into their circumstances, learn their wants, or furnish them with some kind of easy work, and thus raise them again perhaps from beggary to independence. Are there not many persons in every parish, who, if they ever consider the condition of the poor at all, might, without abridging their own comfort, easily bestow upon their needy neighbours a little milk, or a little meal, or old clothes, any or all of which would be a great blessing to a poor family, and could easily be spared by a rich one? The writer has known a few scraps, collected once a-week by the children or servants of a family, sufficient to maintain a poor widow and her famishing children. Private charity, in every point of view, is the most beneficial both to him that gives and to him that receives. Even the satisfaction resulting from such a practice would reward the giver a thousandfold; and it would be equally beneficial to the poor themselves, in keeping alive upon their minds a feeling of *good will and gratitude* for the kindness they thus receive from their generous benefactors. If such a plan were generally adopted, as it has been partially practised in this parish, the smallest assistance from the parish funds would be sufficient to make them comfortable, and the collections would be thus abundantly adequate for the temporary relief of the industrious poor not on the regular roll.

Although the Seceders in this parish contribute nothing to the parochial funds, yet it ought not to be forgotten that, in their turn, they contribute their assistance in the cartage of coals gratis for the poor, and are kind to them in all other respects; and that, in general, they are liberal in their private charity. Among the many kind and generous friends of the poor of this parish, none has a greater claim to their gratitude than the Dowager Lady Torphichen of Cra-mond. Ever since the decease of the late Lord Torphichen in 1815, her Ladyship has annually remitted to the minister of this parish £10, to be distributed to the most necessitous and deserving of the poor, in additional comforts, over and above all to which they may otherwise be entitled from the parochial funds. This generous act of kindness has excited in the minds of many of the poor themselves the deepest gratitude; and, as this sum is generally laid out on the purchase of coals, her Ladyship's donation has become a double blessing, because the heritors and tenants cart and deliver them in rotation gratis.

*Fairs.*—Two fairs are held here annually, one in March, the other in October. Both of these are intended for the sale of cattle and horses, for hiring farm-servants, and for transacting all other kinds of country business. The number of young men and women who generally attend upon these occasions, is very great. Some idea may be formed of the great mass of the hungry multitude who congregate here at these times, when, from actual inquiry, it can be stated that upwards of 540 dozen of twopenny mutton pies have been sold in the village on a market day. Every householder is at liberty to sell porter and ale during the fair. There are nine public houses, or dram shops in the village, three in Bellsquarry, and two on the road between Carn-wath and Edinburgh, the one at the half-way house, and the other at Cairns' Castle Inn. So many individuals being interested in the sale and consumption of ale and spirits, has, no doubt, a most pernicious influence on the morals and habits of the inferior classes of the commu-

nity, and has frequently been productive of consequences the most deplorable and distressing.

*Fuel.*—As this parish abounds in the *element of water*, so also does it afford abundant *store of matter for the element of fire*. The vast quantity of coal now annually consumed by the manufacture of iron, and by steam-engines, has raised the price of this necessary article of daily use so high as to render it scarcely attainable by the poorer classes of the community. The conversion of common peat-moss into a fuel, has, therefore, become an object of no inconsiderable importance. The late Mr Linning, having directed his active mind to this interesting object, made many and various experiments in compressing peat-moss into a fuel, little inferior to coal in hardness, strength of heat, and durability, and even superior to it for several important purposes. Mr Burstall, an eminent engineer of Leith, gives the following account of the preparation and advantages of this kind of fuel.

He states that, having made "a careful trial with my son, of the sample of compressed peat, or Colzium carbon, I have much satisfaction in informing you (Mr L.) that it much exceeds anything I had looked for. The flame is so strong and copious that I fully expect you will produce a powerful rival for most sorts of coal, and for many purposes one very superior. From many carefully-conducted experiments, it has been ascertained that good peat, as commonly made, has about 1-4th to 1-3d the power of coal to raise steam; and, as the powerful means of compression which may be applied, may compress three tons into one, it will, by that means, make it equally valuable, without allowing anything for the great improvement which the working evidently gives it in preparing it for the press. Three tons of charred peat have been proved to have the same heating power as two tons of coal coke. I should, therefore, expect the prepared carbon—as it will be nearly as free from smoke as coke—to answer all its purposes, and give out more heat, weight for weight. But there are purposes in which the prepared peat can be employed, which make it likely to be much more valuable than coal. Its perfect freedom from sulphur, which all coal contains more or less, will make it valuable in many cases for the working of metal, such as gold, silver, &c.; and for iron it may turn out of very extensive use. *Charcoal iron* is double the price of coal iron, merely, I believe, in consequence of its freedom from sulphur; and I see no reason why iron made by peat should not be fully as good." He also mentions that there is another use of compressed peat, which may be of great importance. The great cause of the failure of locomotive engines on common roads and railways, is the *scoria*, or *clinker*, which the intense heat of the furnace produces with either *coal* or *coke*. This, by the use of compressed peat, will be totally avoided. Mr Burstall, therefore, concludes that this will ultimately turn out to be a fuel of great national as well as individual importance. In the Highlands and Islands of Scotland, and in those districts that are remote from coal, it will supply a cheap and ready moving process in the establishing of steam-engines for working threshing-machines, saw-mills, and other engines, where peat-moss is abundant, and coal is scarce and dear. The above opinion has been corroborated by the concurrent testimonies of various persons who were likely to become the most extensive consumers of this kind of fuel.

There being extensive tracts of peat-moss in the southern district of this parish, and Mr Linning having devised a simple and efficacious method of converting this substance into an useful and durable fuel, he let, in 1835, for that purpose, the mosses of Colzium and Cairns, to respectable and responsible lessees. Here, certainly, the first beginning was made of this manufactory, and the first instance given in Scotland of a steam-engine being worked entirely by steam raised by means of this fuel, even in its unprepared and uncompressed state. The lessees were prepared to have started in summer 1836; but the property having been amitted, and the lease vitiated, under particular circumstances unknown to the writer, the further prosecution of the work in this parish was at that time abandoned.

The *Literary Gazette* describes this mode of converting peat into fuel, as an invention of great national importance, by Lord Willoughby d'Eresby, whose machine was lately exhibited at work in the manufactory of Mr Napier, the engineer, York Road, Westminster. So far as it is possible to judge from the operation described, this machine appears to be, if not the same, at least something of the same kind as the steam-engine of the late Mr Linning, which was in operation in this parish in 1834. In his *Memoranda Publica*, of this date, he says that "he was originally, though perhaps accidentally, instrumental in discovering that this vegetable carbon is fertile matrix of gas and tar, and of several other valuable products, while it leaves, as a residuum, an excellent coke, admirably adapted for the use of brewers, and for fusing the precious metals." Lord W.'s improvement is supposed to consist in subjecting the peat to a second compression.

Mr Linning, however, having procured letters patent for Scotland, and having obtained leases of extensive mosses in the near vicinity of Glasgow, and on the line of the Garnkirk Railway, afterwards commenced and established a work there, which, as is reported, proves the efficacy of his method, and is proceeding with the fairest prospects of success. This discovery, simple as at first sight it does appear, may, in time, become productive of great and invaluable benefit to the *agricultural, commercial, and manufacturing interests of the united empire*. It is an invention that promises to produce a new era in the history of fuel, and in the resources of this country, and which is about being carried into operative effect in England and Ireland, and in several of those countries abroad in which peat-moss abounds. As proof of the success of this invention, it is worthy of remark that, on the shortest day of the year 1836, a quantity of wet spongy peat, dug from the moss of Garnkirk, near Glasgow, was moulded into shapes 3000 in number, which were laid upon a common brick stove, and, in twenty-four hours afterwards, part of them was used for firing. These 3000 pieces should, when dried, weigh about three tons, and this small mill with two moulders, will throw off ten tons per day, which, in a stove properly constructed, will dry in twenty-four hours, and should yield ten tons.

The writer was in hopes that these compressed brick-shaped peats might have proved of great utility in draining land, in situations in which draining tiles could not be procured; but, having made several experiments, it was found that, after being soaked for a few weeks in water, they began to dissolve.

## MISCELLANEOUS REMARKS.

The frequent interruptions occasioned in a work of this kind, and the great variety of subjects necessarily brought under review, have, unavoidably, led the writer into several repetitions; and of these, as well as many other defects, he is himself abundantly sensible. He is also aware that the account given in the foregoing pages regarding the ministers of this parish, is very limited; nor does it seem necessary to supply this defect, but in so far as the notice of any of them who have been remarkable has been omitted. In addition to the names of those already mentioned, it may be here stated, that Mr George Dunbar, minister of this parish, died about the end of 1641, and Mr Samuel Rutherford was presented to the Kirk of Calder in October 1642. Some have supposed that Mr Rutherford was presented to the Kirk of West Calder; but this seems to be an error, as the erection of West Calder did not take place till 1645. Mr Rutherford was a person of considerable eminence; and his name is to be found in the list of divines who were sent as commissioners from the General Assembly of the Church of Scotland, to meet the Westminster divines, in 1643, "in order to consult and conclude with that Assembly, in all matters which might further the so much desired union of Scotland and England into one form of Church Government, one Confession of Faith, and one Directory for Public Worship." Mr Rutherford's presentation was sustained; but, although he had previously obtained an act of the General Assembly for this purpose, he was not translated, commissioners having been sent from the Presbytery and University of St Andrew's to oppose his removal, and the Synod of Lothian and Tweeddale having yielded to their desire. Many particulars relating to this affair, have been inserted in the record of the Presbytery of St Andrew's, as well as of the Synod of Lothian and Tweeddale. On the 8th of March 1643, Mr Hew Kennedy, student in divinity, at the university of St Andrew's, was presented, by Lord Torphichen, to the Kirk of Calder Comitatus, vacant by the decease of Mr George Dunbar; and, as the church had been long vacant, his trials were completed in three weeks—that is, by the 19th of March. On the 13th of April, Mr Hew Kennedy was ordained and inducted. For the ceremony of institution, the moderator delivered to Mr Hew, the Bible and the keys of the kirk door, and also gave him possession of the manse and glebe, by delivering to him "*sand and stean*."

Mr Hew was a very remarkable man. He soon distinguished himself as one of the most zealous of the Protestant party—of which Samuel Rutherford, James Guthrie, Patrick Gillespie, &c., were the heads. It was under his zealous administration that, before he had been a year in office as a minister, several witches were condemned to death. He continued in the charge of the parish till the restoration of Charles II., and was regarded by his brethren, after the revolution, as one of the most distinguished of the ministers who had survived the persecutions; and he was the moderator of the first General Assembly which met after the re-establishment of the Presbyterian Church Government, in 1690. In 1663, Mr Colvill was admitted minister of

Mid-Calder, and died in February 1671; and, on 26th May 1672, Mr John Somerville succeeded him, as minister of this parish. The above particulars may, perhaps, be considered as rather out of place here; but the knowledge of them did not come to hand till after the account of the previous incumbents had been printed.

Very little has been recorded of the character and dispositions of the people of this parish, in ancient times; but, if any inference can be drawn from what is known of them during the greater portion of the last century, there is reason to believe that the inhabitants of this place have always distinguished themselves by their great kindness and attachment to their ministers. Half a century ago, the name of the Rev. Mr Watson, the predecessor of Dr Dobie, was wont to be frequently spoken of, by the old people, with peculiar respect. The Rev. Dr himself, after his translation to the church and parish of Linlithgow, and the Rev. Dr Wilson, after his translation to Falkirk, could never forget their kind friends and old parishioners of Mid-Calder; and when speaking on this subject to the writer, they often regretted that circumstances alone prevented them from remaining in a situation so desirable, and among a people from whom they had experienced so much kindness, and whom they so highly esteemed. With the kindness and liberality of this generous people, the present incumbent has no less reason to be highly gratified; since, like his predecessors in office, he also has experienced innumerable instances of the personal friendship of his heritors and parishioners, and some of which he feels himself bound to notice here as deserving of his affectionate gratitude. The heritors granted him a voluntary augmentation of stipend, in 1805, as has been already stated. In 1820, they presented him with an elegant piece of silver plate, for his attention to the concerns of the poor; and to his heritors and the parishioners of all classes, together with the gentlemen of the neighbourhood, he is likewise indebted for another piece of valuable and splendid silver plate, given to him at a public entertainment in 1837, as a testimony of their good wishes and favourable regard. And, although he is fully aware that these expressions of their favour were owing more to the kindness and partiality of his friends and neighbours, than to anything meritorious on his part, yet he cannot deny that he values them the more, as they have been conferred upon him by those with whom, for the most part, he has been long and intimately acquainted; and he could not fail to consider himself extremely ungrateful for these distinguished testimonies of their unmerited favour, if he were to conclude this account of the parish and people of Mid-Calder, without expressing in the strongest manner, the full sense which he at present feels, and ever will feel, of gratitude towards his *parishioners* and *neighbours*, for their long, uniform, and increasing kindness and liberality towards him; in return for which, he here begs to offer them his best wishes and grateful acknowledgments, and to assure them that he rejoices exceedingly to witness their increasing progress in education, their improvements in agriculture, and in all the comforts of social life.

But, although it be peculiarly gratifying to the writer to look back on the many great improvements that have taken place in agriculture, and in the manners and condition of the people, since he was admitted minister of this parish, in 1795, yet he cannot but feel the

most painful emotions of regret, when he reflects that he has lost so many kind and excellent friends and neighbours during that eventful period. It is a melancholy fact, that none of all those who were then proprietors or occupiers of the farms of this parish, now remain. The changes that have been effected, however, in the circumstances, mode of living, and intelligence of the people, have been very great. Formerly, the master and the servants were accustomed to dip their spoons into the same family dish, which was placed on what was called the buffet-stool, that usually stood in the middle of a common mud floor, and to sit, promiscuously, around the same fire in the kitchen; but in many of these farm establishments, may now be seen neat apartments, for the exclusive use of the master and his family, elegantly furnished, whilst the servants have their own table in the kitchen, apart by themselves. On particular occasions, some of the more opulent farmers, when they entertain their friends and neighbours, can set out their handsome mahogany tables, covered with the most beautiful damask linen, and the most elegant Wedgewood china ware, with their silver spoons, and ivory-handled knives and forks, and with as good a sirloin of roast-beef and plum-pudding, and as good a bottle of Port, Sherry, and Madeira, as can be met with anywhere, at the best gentleman's table in the kingdom. But even in such an establishment, the master and mistress of the household—from the earliest dawn of the day, till near the setting sun—will be found as laboriously occupied, during the busy seasons of the year, as any of their domestics; whilst they occasionally, in the after part of the day, appear in their best dresses, to spend an hour or two at a merry-making or convivial entertainment, with their friends and neighbours.

But *the general aspect of the country, as well as the manners and condition of the people*, is entirely changed. Calder-Moor has long since vanished; and, in place of the yellow broom and the whins which formerly covered the face of that district, there may now be seen substantial and commodious farm-buildings—barns and stables covered with tiles, and the dwelling-houses covered with slate. The cold mud floors have been replaced with wood or stone, and the long neglected moor is now adorned with luxuriant crops, and ornamental plantations. The labouring classes of the inhabitants are also greatly improved in their condition. They are better clothed, better lodged, and better fed; and, above all these, they are better educated. The children of this parish are early placed under the care of the most enlightened and excellent teachers. Besides the ordinary branches of education, most of them are instructed in the science of geography, astronomy, mechanics, mathematics, and natural history. They are also carefully instructed in the knowledge of the Scriptures, and early trained up in the principles of the Christian religion, and the duties they owe to God and man. With only a few exceptions, the parents have learned to follow the best of all maxims, “to train up their children in the way wherein they should go;” and most of them are now fully aware, that education not founded on religion is more than vain, and that a *Scripture education is the one thing needful*. To this religious and moral training, doubtless, it is owing, that our countrymen have been so highly respected, so generally trusted, and so success-

ful in foreign lands. To this, also, in a great measure, must it be owing, that the general appearance and comforts of the people, in this district and throughout Scotland, are so much improved. At no former period were the schools in this parish ever known to be in a better or more flourishing condition than they are at this present day. Since writing the foregoing pages, the parish school has increased from 96 to 106, and that of Bellsquarry, from 50 to 57, making the number of children, at different periods this year, under instruction in this parish, 353, being considerably more than one-fourth of the whole population. In consequence of the legal, wise, and excellent establishment of parish schools in Scotland, the expenses of education are extremely moderate. What, in the great towns in England, and in some private academies in Scotland, is paid by the more opulent classes of the inhabitants, per quarter, is 40s.; whereas the same branches, in this parish, and in general throughout Scotland, in the endowed schools, costs only 2s. or 3s.; and the parents—if they be really industrious, and unable to pay for the education of their children—on making proper application to the minister and heritors, may for the most part, have their children admitted gratis into the parish schools.

The improvements, also, which have been effected in the cultivation of the land, in the rotation of the crops, in the selection of the seed and quality of the grain, and in the introduction of a great variety of new manures, have been very great. The enclosures are more numerous and convenient; the hedges and fences, of all kinds, are better preserved in the lower districts; and in the upper districts, the land belonging to each proprietor is surrounded by a ring fence, or stone dyke. The public roads are also greatly improved. In general they are beautifully smooth, and in many places splendid. There is one error, however, in dressing the sides, which might be easily remedied, by removing entirely the green turf between the metal bed and the water run, because, in roads much frequented by cattle, the verge, in wet weather, is soon trodden down, and, being converted into mud, the side of the road becomes worse than before. But how great soever may have been the improvements of every kind in this neighbourhood, it cannot be disputed that the land is susceptible of a still better system of cultivation, although, in ordinary seasons, the low price of farm produce, places these necessary improvements beyond the reach of most of the present occupiers, without some suitable encouragement from the proprietors. The writer is, therefore, not without hopes, that, from the judicious improvements that are carrying on in this and other districts, landlords, in this neighbourhood may, ere long, be disposed to hold out some additional inducements to those of their tenants who may be willing, but unable to enter upon a field of greater improvements. To render this little work more useful, perhaps a few hints might be suggested to both landlords and tenants, on the subject of rural economy; but, as any remarks of this nature might be considered foreign to the history of this parish, and would be equally applicable to other places, any observations of this kind will be more properly transferred to an appendix.

## APPENDIX.

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As every skilful farmer ought to be familiarly acquainted with the nature and properties of soils, the best and most improved methods of draining, and the management of stock, the design of this appendix is to suggest, or rather to recall to the recollection of both landlord and tenant a few particulars on these subjects, which, although generally known, and though they have been ably discussed in many recent publications, may not have lately been brought under their notice, and some of which are, at all times, apt to be either forgotten or neglected.

*Of the nature of soils and their improvement.*—Soils originate from the destruction of rocks, which are so liable to decomposition that they are constantly crumbling into dust. In their pulverised state, they are divided into many various kinds, according to their prevailing constituent parts, which may consist of sand or gravel, clay, chalk, or peat. These soils are the medium by which plants obtain their food and nourishment, to which the plants adhere, and by which they are upheld in their different positions. The constituent parts of soils and their different kinds may easily be ascertained by the plants which they naturally produce. The richest herbage, and the finest grasses, such as the *poas*, indicate loam, or vegetable mould; common *coltsfoot* or *tussilago*, and *tansy*, are indications of clay; the *poppy*, of gravel or sand; the *spiked speedwell* and *sanfoin*, of chalk or lime; the *heath*, of peat; and the *common sorrel*, of iron. The *qualities of soils* may also be easily ascertained. *Clay* is known by its tenacity; *sand*, by its grittiness to the touch; and *chalky or calcareous soil*, by its effervescing with strong vinegar. The object of the agriculturist is to obtain the proper mixture of these ingredients, so that the soil may be sufficiently adapted for filtering the water, and at same time retain such a degree of moisture as is requisite for the nourishment of the plant, without becoming either too wet or too dry. Water holding organic matter in solution, being the principal source of nourishment to plants not naturally aquatic, the soil must therefore be moist but not wet. When soil is saturated with water, as in the furrows of wet clay, the necessary air is excluded; and, where too dry, there is no solution of organic matter, and consequently no nourishment. In the one case, the plants have no available food, and are therefore starved; and, in the other case, the soil being saturated with too much water, they are drowned. It is necessary therefore to pulverise the soil, so as to enable the roots of the plants to range freely, and at same time to inhale the air, and, by capillary



attraction, to retain a sufficient degree of moisture for their regular food. By *deepening the soil, and thorough-draining*, all these advantages may be obtained. The retentive subsoil is, by this means, converted into a channel or drain for carrying off the superabundant moisture, and into a reservoir during a season of excessive drought; so that the soil is neither saturated, at any time, with too much water, nor too dry. Agriculturists have of late discovered that the most barren and retentive soils are thus capable of being pulverized, and rendered fit for retaining a sufficient degree of moisture for all the purposes of vegetation, and, to accomplish this, they have therefore had recourse to the *subsoil plough, and thorough-draining*.

To know what these ingredients are, which constitute the most productive soils, must be an interesting desideratum to every practical farmer. Such a knowledge would enable him to discover what is essential to the production of a vigorous plant, and to remedy in future any deficiencies or losses to which he may have been formerly exposed, in the quantity or quality of his crops. To assist him in this inquiry, and to discover what necessary ingredients are wanting to render any particular soil productive, the following tests ought to be attended to. Sir H. Davy analyzed an excellent wheat soil, and found that it contained of clay 29 parts, sand 32, chalk 28, and animal and vegetable matter 11, making in all, 100 parts. Having also examined a productive turnip soil, it was found to consist of clay, 14; sand, 15; chalk, 63; vegetable and saline matter, 8; in all, 100. The fertility of soils is found always to be in proportion to the quantity and proper mixture of clay, sand, chalk, and vegetable and animal matter, which they contain. Now, the quantity of these, contained in any particular soil, may easily be ascertained in this manner. Take a portion of earth, and breathe upon it, and then compress it, if the smell be like that of fresh earth, and if the compressed form remain for any length of time, then it must contain a portion of clay. Then rub the earth upon a piece of glass, and, if it be scratched, it contains a portion of sand; next, pour upon it a few drops of vinegar, and, if it effervesce, and produce bubbles of air, it contains chalk. If, when burned in a tobacco pipe, or an iron spoon, it catch fire, and burns, or emits the smell of burnt wool or feathers, it must then contain vegetable or animal matter. In this manner, it is possible to discover the ingredients of which any soil is composed, and, by supplying the necessary proportions of those that are wanting, to remedy its defects. According to its adhesive quality when compressed, to its effervescence with vinegar, and to its smell when exposed to a burning heat, in proportion to the quantity of each of these ingredients will be the fertility of the soil we may wish to examine. In this manner, every intelligent farmer, by a few trials, may be enabled to form a pretty correct idea of the nature and properties of soils, and how to judge of their fertility. Many interesting particulars on this subject may be found, in an excellent *article on soils* by the talented Dr Blacklock, in a country weekly journal, from which some of the present hints have been obtained, and which article has been preserved in the appendix to the Practical Farmers' Manual, lately published in Glasgow by a country clergyman.

*Draining* pasture and mossy land renders it more healthy for the stock, and makes the grass not only more nourishing and more plenti-

ful, but also more palatable. In making sheep drains, a deep furrow is taken by the plough in the direction wanted, then a few inches are taken out with the draining spade, and thrown aside, and the furrow taken out by the plough is again turned back and replaced. In arable land, a trench is dug with a common spade, then a small spit is taken out from the centre with a narrow spade, which leaves a shoulder on each side to support a turf, over which the earth is again filled in; or a common wedge drain may be dug, and filled up with heather, keeping the tops up and the roots down, over which the earth may be replaced. Furrow draining is somewhat different, and being so well known, requires no description. These drains should be from 24 to 26 inches deep from the surface; and, in most kinds of soil, the deeper they are, they draw the better; but, when stones are to be used for filling, it is not necessary to cut the drains so deep.

Among both the landlords and tenants of this neighbourhood, there at present exists a strong desire, not only to become acquainted with the method of this admirable system of cultivation, but also to adopt it; and it is much to be regretted that, around all this district for several miles, no sufficient quantity of pure clay can be found, to induce any individual to erect a tile manufactory for the supply of this neighbourhood with tiles for draining. By the late improvements which have been introduced into the manufacture of tiles, there is now every reason to believe that tile-draining, if materials at a moderate expense can be procured, will be very extensively prosecuted in this quarter. In other places, a great reduction in price has taken place, in consequence of the improved machinery that has been introduced. In 1833, the system of tile-draining commenced in Ayrshire, in which the Duke of Portland took an active lead. The common draining-tiles at first cost £3 per thousand, and those intended for main drains and sewers of a larger size cost considerably more. In 1835, they were reduced in price to £1 : 6 : 8 per thousand; but, in consequence of the important improvements that have been made in their manufacture, the price has been reduced still further. A very curious machine has lately been constructed by the Marquis of Tweeddale, for making bricks and draining-tiles, &c., which not only discovers great ingenuity, but which is of great practical value. By means of this invention, the expense of manufacturing these articles has been prodigiously reduced. It may be stated as a fact, that this machine, requiring a power equal to one horse, with the assistance of one man and two boys—one to feed in the clay, and the other, with the man, to remove the tiles to the shelves—will make 12,000 tiles in a day of ten hours, when three or four men can produce only 1500 by the former mode, in the same time. To furrow drain one acre, 3,129 tiles, of fourteen inches in length, will be sufficient, at fifteen feet distant; and, at eighteen feet distant, only 2,607 would be required; which, even at the old high price of £1 : 6 : 8 per thousand, will, for drains fifteen feet apart, cost only £4 : 3 : 6; and, at eighteen feet, £3 : 10 per acre. With coals and carriage at 9s. a ton, the old tiles were manufactured at that price, but with soles, they cost one half more.

If the subsoil be dry, and the land flat, the water will never run over it excepting when much poached; and wherever the water penetrates, the vacancies are filled with air; and it has been found

that thorough draining raises the temperature of the soil two degrees ; and, under ordinary circumstances, clay land that has been drained can be worked and sown a fortnight sooner, and consequently reaped so much earlier, than it could have been in its former state ; and, on a farm of eighty acres, such as in the Carse of Gowrie, thorough draining will save a pair of horses, and the land, besides, will be much easier wrought. In pasture lands, even turf drains have been found of great benefit, and will run well for many years, and these can be executed at a very small expense. Several fields in the glebe of Mid-Calder have been thus drained to great advantage ; and this improvement will be felt so long at least as they remain in pasture.

There may, perhaps, be some difficulty in arranging the expense of draining between landlord and tenant, especially if only a few years of the lease be to run. This must be a private transaction, and such as will remunerate the tenant for the bulk of his outlay. It is the tenant's duty to advance the landlord's interests, as well as the proprietor's to have a reasonable regard for the welfare of his tenant. His Grace of Portland, it is understood, pays for all the drains, and charges the tenant so much per cent. on his outlay. Some landlords open the drains, and the tenant fills them with stones or gravel ; and sometimes the landlord pays double of the tenant, according to circumstances. Filling the drains with stones or gravel, is a sure preventive against moles, or rats, or other vermin, stopping the flow of water. All drains should be filled down the declivity, to prevent the lodgement of mud or sand. One of the most spirited and extensive drainers, Mr Stirling of Glenbervie, near Larbert, raised thirty tons of yellow turnip per acre on land that could not have produced turnips in its former state. Part of them were sold at 15s. per ton or cart, as many as he chose to sell, and the crop was thus worth £22 : 10s. per acre.

*Subsoil or deep-ploughing.*—The subsoil plough is a powerful instrument, and operates like a pick, breaking up or loosening the subsoil without raising it to the surface ; and it thus forms regular channels for the water to flow from all parts across the ridge towards the drains. This plough is then followed by the common plough, which throws the uppermost and productive soil over the loosened subsoil ; and, when the land has been thus thoroughly drained, deeply wrought, and fully manured, the most barren ground will thus, in a short time, be converted into a deep, rich loam, rivalling in fertility the most productive land. Subsoil or deep ploughing, may be accomplished in winter, how wet soever the land may be. The horses drawing the common plough may be put on the land by means of a long mizzle. The subsoil plough then follows in the same tract or furrow. It is recommended, where the subsoil is not very bad, to put four horses in both ploughs, and take a furrow of ten or eleven inches with the first, which divides the labour and makes it easy work. The subsoil plough should penetrate eighteen inches from the original surface, or as much deeper as attainable. The advantage of putting four horses in each plough is, that it enables the plough to take a deeper and broader furrow, and thus gives the horses with the subsoil plough a better footing ; and if the subsoil plough strike a stone which has had ten or eleven inches of earth taken off it, this will enable the plough to throw the stone to the surface. In this way it does not require eight horses for the subsoil plough, as the

four horses can be shifted by opening four ridges at once; but the ridges should be finished the same day, because, if the ground should get rain before next day, it would make the subsoil ploughing oppressive to the horses. The large subsoil plough costs from £7 to £8; but a lighter kind for three horses can be obtained for £3 : 3s.

In looking into the writings of some of the most ancient authors, it will be found that many of the modern improvements in agriculture are such as were formerly known, and have been long lost and forgotten, but again discovered and received. The *Georgics* of Virgil contain almost all the genuine principles of modern agriculture, and may be read with advantage, even at present, by all who wish to be thoroughly acquainted with this subject. His rules regarding the various kinds of soil best adapted for different kinds of grain—what is most suitable for corn, and what for pasturage—may still be considered as those of good husbandry. He directs the husbandman to plough rich soils in spring, and delay those that are not fertile till autumn, that, by fallowing, they may twice feel the influence of the sun, and twice the cold; and to plough clays of all kinds frequently. Like a person skilled in rural economy, the poet, in order to renovate the soil, prescribes that those fields which have been laboured should rest, and be in pasture, in alternate years, and permits a repetition of the same crops only after the ground has been sufficiently enriched again with manure.\*

The principles of agriculture are now so well known, that none need despair of bringing almost any soil to fertility, how sterile soever it may have been in its natural state. Even barren clay, after it has been sufficiently manured and properly cultivated, is among the richest of all soils, and bears the greatest quantity of the best wheat, and other crops of the finest quality. It produces the soundest grain, and the truest boll; but this clay must be *thoroughly drained, and fallowed and enriched with other mould or earth, or with vegetable or animal matter or other manure*. Wet land, when drained, generally retains a great quantity of salts and unctuous matter, which, by the influence of the sun, becomes a powerful stimulus to vegetation. Unctuous matter and salts are necessary for the food of plants. Pure sand and gravel alone, are incapable of retaining moisture and nourishment; and, therefore, till they receive a due proportion of earth and clay, they are destitute of the necessary means of fertility. Of what do the richest soils consist, but of a proper mixture of earth, clay, and sand, upon a porous or drained subsoil or bottom? What is requisite for rendering clay fertile, but pulverising the upper stratum, by fallowing, loosening the subsoil by trench or deep ploughing, and drawing

\* An excellent translation of the "*Georgics* of Virgil" was published in Edinburgh, in 1742, by Mr James Hamilton, then schoolmaster of Calder-Clear, or East-Calder. The work is enriched with many excellent notes, and a short account of his own experiments on the subject of agriculture; and it is indeed true, what this learned and judicious translator has said, "that the world owes the principles of agriculture more to Virgil than any who have wrote thereupon for many ages bypast." And it may be here added, that in nothing are the judicious notes and reflections of this talented translator inferior or less useful than the principles laid down by the original author. In the appendix of the translator there are many excellent hints, well deserving the attention of every practical improver.

off the stagnant water, that the air and rain may circulate freely, and that the roots of the plants may be sufficiently dry in a wet season, and sufficiently moist, by evaporation, in a dry one? Are not the carses of Gowrie and Stirling naturally more fertile than any grounds in this district, merely because they contain a proper mixture of these fertilizing qualities, and have long experienced the effects of good cultivation? Many of our richest soils and finest grasses are to be found on the numerous little rising grounds or mounds that are everywhere to be seen amidst the marshes and bogs of the upper districts, and around the sides and bottoms of the hills, between sea and sea, in every direction. These mounds require only *shel'ler, draining, and cultivation*, to improve the climate, and to render them eminently fertile. The proprietors of these lands are not yet aware of the great advantages of enclosing by good hedges, sheltering by strips of planting, and draining the bogs and marshes by ditches and ponds. These high districts would then be less subject to early frosts, and the crops would sooner come to maturity in backward seasons. The grass, in spring, would not only be much earlier, but also much more abundant, and the cattle and sheep would feed more plentifully thereon at all seasons. Some of the best and most luxuriant vegetables are to be seen in the highest ground; and why might there not be also some of the most luxuriant and earliest grasses?

Frequent ploughing, stirring or fallowing the ground by green crops, or otherwise, tends, in a certain degree, of itself, to enrich the soil. By this means, the roots of all weeds are extirpated, and the soil is exposed to the warm influences of the sun, by which the superfluous juices, and all the noxious qualities arising from stagnant water or moisture, are exhaled, and nothing is left but what is fit for nourishment to the plant; the soil becomes fit for imbibing salts and nitrous particles from the air; the pores of the ground are opened, and the tender fibres are thus enabled to penetrate more freely in search of their food and nourishment. These effects may be produced by green crops, and by hoeing or fallowing the intervals between the green crops or drills. The land may be farther enriched by turning in the sheep to eat the turnips, if the ground be dry. They are allowed first to eat the leaves and part of the root, after which the remainder may be carried home for the use of the cattle and hogs in winter.

The ground may also be improved in various other ways. One soil may be corrected, enriched, and ameliorated by another, according to their different qualities. Stiff clays may be improved by sand, and sandy soils by clay. Although sand may have nothing in itself of a fertilizing quality, yet, by separating and opening the clay, it enables the roots and fibres of the plant to penetrate and to draw its proper nourishment. Indeed, the mixture of any two soils of different kinds will be found to be of great advantage. Sea sand not only opens the pores of stiff clays, but enriches the soil, by the salt and shells of those creatures that are mixed therewith, and great numbers of which are altogether imperceptible to the naked eye. Swarding and superinductions of different soils, scourings of ponds or of ditches from fertile ground, will always be found a valuable improvement, especially if mixed with limeshells. The farmers in England manure their pasture-fields once in three years—generally about the begin-

ning of winter—and harrow it in with a brush-harrow. A compost is better than unmixed dung; and the bottoms of haystacks, mud, or virgin earth, make the best composts for this purpose. This practice—productive of so much good to England—might be followed, with great advantage, by the farmers in Scotland. Water from the dunghill, or cow byre, is of the richest quality, and produces a rich abundance of the earliest and finest grasses, although, by most of the farmers, this valuable manure seems to be entirely lost sight of.

The proper rotation of crops is also a matter of no inconsiderable importance; but this being a subject now so well understood by every practical farmer, requires no illustration. Every one knows that the rotation should be adapted to the climate, soil, and situation. Perhaps the best rotation for this district would be—*1st*, potatoes and turnips; *2d*, barley; *3d*, ryegrass; *4th*, pasture; *5th*, oats. Fallow is often substituted in place of the first of these, as a preparation for wheat, although the quantity now sown in this district (westward) is yearly becoming more limited; because, in this climate, it is found to be a very exhausting crop, being seldom less, in this parish, than twelve months in the ground; and, after all, it is found often to be of inferior quality. In early seasons, when beans come to maturity, they are a profitable crop; and the most approved practice with the Carse farmers is to spread the dung on the wheat stubble as soon as the field is cleared in harvest, where it remains in that state till the spring, when the seed is ploughed in. The bean crop is succeeded by barley or oats, and then again by hay and pasture. The ground should, on no account, be allowed to become foul or exhausted. In such a state nothing can thrive. If the land become poor, the tenant will be poor also; and to allow the land to be overrun and exhausted with weeds is inevitable ruin.

*Of Manures.*—There is nothing that contributes more effectually to the prosperity of the agriculturist, than abundance of manure. This ought, therefore, to become an object of minute attention. Each soil requires the manure best suited to its peculiar quality. Cows' dung is best adapted for sand or gravel, and horses' dung for cold clays; and ashes also, of all kinds, are excellent for ground of the same quality. These manures abound with sulphur and saline particles. Soot is excellent for either grain or grass; and ten or twelve bolls of it, per acre, is commonly sown on wheat in winter or spring, or on barley five or six inches high. The hogs' dung is the richest and most fertilizing of all quadrupeds', when he is fed with beans and other rich nutriment. Moss, mixed with hot dungs and lime, frequently turned over, is also a valuable manure for clay soils.

It has been recommended by the translator of Virgil, the school-master of Calder-Clear, or East-Calder, to erect a deposit house for manure, with a wooden roof supported by pillars, or even to use an empty house for this purpose, according to a practice sometimes used by our southern neighbours, who often lay it up in outhouses, or under their granaries. Short horse dung mixed with soot ashes, and frequently watered from the dunghill, and with night soil, will then become so rich that ten or twelve cart load sown with the hand will be sufficient for an acre. An old fold dyke or turf stack, laid in the bottom of the dunghill, and frequently turned over with the dung, will

greatly increase the quantity of excellent manure. Weeds of all kinds, collected in summer, will also add much to the bulk of the dunghill, and may, by care, be converted into a valuable treasure. Everything, in short, that has salt, that is unctuous or nitrous, may profitably increase the power of vegetable production, and thus enrich the farmer. Burnt clay, earthen dykes, rushes, ferns, heath, oil-cake, bone dust, rape-cake, all may be converted into manure.

As manure is the very life of good farming, so it has become one of the chief objects of every skilful agriculturalist to collect masses of dung, and composts of all kinds of materials, by every possible means. Professor Bradley, therefore, in the appendix to his *Philosophical Account of the Works of Nature*, and in his new experiments relating to the improvement of barren grounds, recommends the following plan for raising dung:—If a person can keep 300 or 400 sheep, and house them every night in winter, and in summer at noon, and upon the bottom of the floor lay three or four inches of sand, or rich light loam, and on this lodge the sheep for a night or two, till the soil be enriched by their manure, and thus continually lay on more in the same manner—500 or 1000 cart-load of dung may be thus obtained every year. If there be any ponds, the cleanings of them being cast out, and turned over, will be excellent matter to mix up with this kind of compost; which, when laid upon coarse uncultivated ground, is baked and burned. He also recommends marl to be laid on in summer upon heathy and barren ground, at the rate of 40 load per acre, letting it lie all winter, by which time it will be washed into the ground, then cake and burn it, and sow the land; but, even without burning, this is a valuable manure.

By the establishments in Holland, instituted for the relief of mendicity, every family is required to form large composts of all kinds of materials which they can possibly collect; and great masses of manure are thus created, almost wholly by manual labour, of such substances as, without this application, would be wholly lost to the community. The heath land is pared in thin slices of earth, not to the bottom, that the roots of the plants may soon shoot again; and these sods are sold to the householders, and when dried, are conveyed to barns, or piled in a kind of stack, and portions of it are pulled out, not cut, that they may be thus broken into small fragments; and with these they bed the cows and sheep. For the same purpose, they sometimes pare the second year's grass land, whether clover, ryegrass, or fiorin; and these become useful auxiliaries to the heathy turf. With these materials the cattle are bedded every morning or evening, and they remain under them seven days and seven nights, when the bedding is wheeled to the dunghill. Each morning, that which lies nearest the hinder part of the cattle is thrown forward, and that towards the head is reversed, and a little fresh turf is added. The sheep and pigs are only supplied with fresh heather once a-day, and ten sheep are reckoned to make an equal quantity of dung with one cow. The frequent headings and turnings give greater scope to the fermentative putrefaction. Each week the stalls are cleaned, and the dung is conveyed into the dung-stead, which is commonly three or four feet deep, and is walled either with stone or turf, and made water-tight. It is large enough to contain all the manure made in the course of four weeks; and

over this the ashes from the household, and all the sweepings of the premises, are strewed. The drainings of the stalls are all conveyed into this reservoir, and every other material for compost is preserved. This cess-pool is never allowed to run over, and, if it has not rained, it is every other day filled up with water, and then, with a scoop, taken up and sprinkled over the heap of dung. At the end of four weeks, the dung hill is emptied, and its contents thus again turned over, the most putrid parts being by this means brought to the top; and it is then formed into a heap from three to four feet high, and carefully covered with sods, by which means the fermentative heat is prevented from evaporating, and the rain water is prevented from penetrating into the mass, and thus choking the fermentation. When this heap has fermented two or three months, it is carried into the field that is to be manured, and the covering of sods is taken to the dung-stead, and laid at the bottom of the next monthly accumulation. Thus it appears, that a vast quantity of manure might be obtained on every farm of any extent, at comparatively little expense, if each tenant were constantly to employ an old man or woman to manufacture such valuable compost. A person might easily be found adequate to this work, who would consider himself well paid by receiving two meals and sixpence a-day; and it would thus furnish employment for aged people, who are incapable of any other work.

A process has lately been invented, by M. Jauffret of Aix, for obtaining cheap and valuable manure without the aid of cattle, in the space of twelve days, and with great economy. By a cheap *wash* or *lee*, the ingredients of which are to be found in all places, all sorts of herbacious substances—such as heather, furze, brambles—can be put into a state of rapid fermentation, and even earth itself, be its nature what it may, be converted into valuable manure. It is stated that the manure produced by this new system is as valuable as that of the best horse litter, and it can be obtained with perfect facility at pleasure. The proofs of its efficacy have been fully ascertained in France, for nine years, in several Communes. By means of a cutting machine, three men and a horse can prepare about seven tons, English, of manure per day. One ton of straw or other materials will produce four tons of manure. The wooden cistern, and the ingredients of which the lee is composed, may be carried to the field to be manured, and the compost may be prepared on the spot, by which the escape of the gas, one of the most valuable component parts of manure, which takes place during the removal, is thus prevented. The cutting machine may be worked either by horse, water, or steam power.

The machine will cost about fifteen pounds; but small farmers can cut their weeds by hand, and prepare a quantity of manure as perfect as any made by the machine. The conversion of the earth into manure can easily be effected without the aid of the machine, and the manure made from the earth by this new process is as valuable as the compost. Those who have no cattle may employ all their fodder for manure, and others can render available, weeds, briars, dogstooth, thistles, &c.; and farmers who have none of these, can convert earth into manure; so that no discovery was ever more capable of easy application. In the case of those who find it difficult to obtain a sufficiency of manure, the advantages of such a process must be incalculable.



The above is the substance of a report made to the Committee of the Academy of Agriculture at Paris, by M. Chaielain, its Secretary, one of those who were appointed by the committee to examine into the merits of this invention. The materials of which the wash or lee is composed have not as yet been divulged; but the inventor asserts, that he can vary the degree of fermentation, and raise the heat as high as 60° Reaumur, (167° Fahrenheit,) by which the germs of all noxious weeds will be destroyed. The Academy of Aix, in their annual public report, have attested the success of these trials in session 1835; and it seems unaccountable, that, if satisfactory experiments have been made in this invention of M. Jauffret's, for so many years in France, they have never once been attempted in this country.

*Cultivation of Flax.*—Half a century ago, most of the farmers in this country were accustomed to raise as much flax as they required for shirting, bed and table linen, and various other purposes, for the use of their families and domestics. The master was generally bound to furnish each domestic with a certain portion of ground for raising flax, which was made into linen for their own private use; and, although this practice of late years has been entirely abolished, in consequence of the low prices of cotton cloth, yet the cultivation of this article of manufacture still holds out to the farmer an abundant remuneration. The linen trade is the staple of Ireland, on which it is hoped the sun will never again set. The wear of linens is almost universal. They are found in the east and in the west, in the north and in the south; and the cultivation of this article, of which the linen is composed, is highly profitable. It is good for the landlord, for the tenant, and for the manufacturer. Of its profit and utility there cannot be the least shadow of doubt. It is told by Mr John Caughy of Belfast in Ireland, "that an acre may and has produced three hogsheads of seed, worth from six to ten pounds, and from sixty to seventy stones of lint, worth about thirty pounds; so that a medium or good crop of flax will bring in, fully forty guineas per acre, if well cultivated and managed." As thousands of tons of flax have annually to be imported from the Continent into this country, the growers of flax need not anticipate an overstocking of the markets. In Belfast alone, there are fully 500 tons of rough lint manufactured every year; and Dundee itself manufactures about 40,000 tons annually, besides what is imported into Leeds and many other places. How much of this consumption might be supplied by home-growth, and the money retained to enrich ourselves! Independent of the value of the lint thus raised, the refuse of the seed and the husks, when crushed, is an excellent food for live stock. It is a food both wholesome and nourishing in the highest degree to every sort of animal about the farm. It serves as meat as well as medicine, and the latter more especially to horses, many thousands of which are prematurely cut off, for want of some food of this lubricating nature. In many human diseases the use of linseed is an effectual cure. In the diseases of most animals the occasional use of it is no less efficacious. To cows and horses the substance of the husks is equal at least to that of bran, and is found to be extremely beneficial to animals feeding on hay, dry straw, or hard food. In all respects, therefore, it is a most valuable and de-

sirable crop, every part of which, by judicious management, may be converted to some important and beneficial use.

Flax is a plant that will grow in any country, if the soil be not exhausted. It thrives best in soil of a hazel colour, and of a plastic or adhesive texture. The application of lime, as a manure for lint, is hurtful, as the ground is thereby rendered incoherent, light, and warm—the very opposite of good flax soils. Manures for lint ought to be of a cooling and adhesive nature, and the subsoil ought to be always rather clayey, cold, dense, and damp. All subsoils of a loose character are unsuitable for flax, and ground that is flooded, or much sheltered and enclosed, is not suitable. Flax has been considered as an exhausting crop; but this is not the case. Flax ought not to follow flax. The manure given should be of a solid and lasting nature, and peas and potatoes are among its best forerunners. Ground exposed to the weather during winter is the best receptacle for the seed, and the crop is always most productive, when this weather-beaten surface is kept uppermost, that it may receive the seed; consequently, deep ploughing for flax is improper, and a repeated ploughing in Spring is still more so, as it would render the ground too loose, and cause the flax to wither before coming to maturity. Good potato ground ought not to be ploughed at all, but merely well harrowed; and the best time for sowing is about the beginning of April. The drill mode of sowing is better, and more even, than the broadcast; and it will be beneficial, in all cases, to roll before sowing.

*Flax Seed.*—Home seed, if good, is far superior to that which is imported; both, because to a certainty it is new, and also because the soil is known on which it is raised, so that the grower has it in his power to effect a change of soil by a change of seed, and to sow it upon ground of an opposite nature from that on which it has been produced. This sort of change has been found beneficial. Two bushels and half a peck, imperial measure, of good seed, are sufficient for a statute acre, for flax intended for common use; but, if intended for fine purposes, such as cambrics and lawns, the quantity ought to be considerably larger for the same ground. When the crop is thin, it will be unproductive, and coarse in proportion, especially if the ground be rich. Seed, if really good, will grow the second year, but it will be one or two weeks later than new seed; and hence, in purchasing seed, there is the risk of a mixture, particularly if it has passed through many different hands. Timely and proper weeding is of great importance. If too late, the stalk will be so bent by the pressure of the weeders, that it will be apt to be broken by the scutchers, and the lint will thus be so much shortened. Timely weeding serves as a kind of moulding to the crop; it consolidates the surface of the ground, makes the flax thrive a great deal better, and prevents the moisture from escaping.

The proper time for pulling can only be ascertained by experience; and it is of great importance to consider whether the lint or the seed is to require the greatest attention. If the ground has been poor, and the sowing rather thick, then it will be an object to have the lint as fine as possible—in which case, it must be pulled when the flax is in full bloom; and the sheaves should be small and well dried before watering, to harden the fibres, and give them stability. Lint of this kind will be exceedingly fine; and, being fit for the most delicate fabrics,

will bring a higher price. If, on the other hand, seed be the object of the grower, the flax ought to stand till it has attained the highest perfection. This may be ascertained by cutting a few of the bolls across ; and, if the seed appear neither watery nor milky, it is fit for pulling. When sufficiently dried, the bolls can be separated from the stalks, either by a ripple or by an old scythe-blade, or long knife—and turning round the sheaf, upon a board, to meet the stroke of the knife. The flax is then conveyed to the dam, which ought to consist of the purest, softest, and warmest water. Hence, running-water is altogether unfit for good steeping. The lint should be packed in, vertically, as it grew, and not too close ; and the dam will be most convenient if long and narrow, and should be cleaned out and prepared long before it is wanted. The lint, in the dam, should be covered by a screen—not of mud, but of straw, rushes, coarse grass, or hedge-weeds, laid between the weights and the top of the flax ; and the same materials should be placed beneath the lint, which ought not to touch the bottom. Too much water is improper ; and the pit ought to be exposed as much as possible to the influence of the sun. Flax steeped in running water loses in weight, and in its oily matter, which is of no small consequence to the grower. The time of maceration is generally eight or ten days ; but this depends entirely on the state of the weather. It is fit to be taken out whenever the bark separates freely from the stem, or it may remain other twelve or fourteen hours, if doubtful. The drying process, when the lint is spread out, will be accomplished in about seven or eight days ; and it ought, if possible, to be quite dry when taken up, and to stand for a day or two before being stacked ; but drying on kilns tends to destroy the texture. Scutching is best performed by the hand ; and leaves a greater weight of fibre than when done by machinery. After scutching, the finishing operation is hackling, by which the lint is combed quite clean, and entirely separated from the parent stock ; and becomes fit for the market.

It is much to be regretted that spinning lint by the hand has been almost entirely abandoned, since it furnished much useful employment to aged spinsters ; and even profitable occupation to many a thrifty housewife. It enabled the provident young female to pass many a long winter evening in cheerful industry—thus providing for a house of her own ; and performing her busy task with infinite pleasure. At one period, in almost every house in the country, of a winter evening, might be heard the merry song, and the sound of the spinning wheel.

The object of these remarks, which may appear uncalled for in a trifling work of this kind, is to direct the attention of the proprietors in this district, to the great advantages that might result to this parish or neighbourhood from the erection of a flax spinning-mill. The erection of a mill, for the manufacture of lint or wool, would greatly contribute to the industry and wealth, both of the people themselves, and of the tenants and landlords. Many fine situations might be selected for a work of this kind in this vicinity, and large portions of ground, in the upper as well as in the lower districts of the parish, are admirably calculated for raising flax of the finest quality ; and everywhere may be found abundance of soft, pure water for steeping it. Like most other villages, Mid-Calder requires some additional employment, especially

for the younger portion of the population. The inhabitants have no trade of any kind, and, consequently, a considerable number of young persons, how inoffensive soever they may be, must be idle, and therefore without the means of a comfortable living. To afford them the opportunity of industry, and to render them independent if not affluent, a manufacture of flax or wool, or of both, would be to all this neighbourhood an essential advantage. The inhabitants of the village of Dunmanway in Ireland were precisely in the same condition as the people here, when, in 1733, Sir Richard Cox began to establish the linen trade on his estate, which furnished lucrative employment for the increasing industrious population. The means which he adopted for bringing his scheme to perfection are admirably described in his letter to Thomas Prior, (see third edition, published in Dublin, 1752.)

If any similar manufacture could be established in this place, it could not fail to supply unlimited employment for our population. In a manufactory of this kind, the industry of the people both old and young might be exercised in so many different ways, such as sowing, weeding, watering, grassing, scutching, hatcheling, and dressing, that it might become the means of rescuing many young persons from idleness and poverty, and of placing them in a condition of comparative affluence, in which they might be plentifully fed, decently clothed, and comfortably lodged. The land would thus also increase in value in the hands of the tenants; and the landlords themselves would ultimately profit. Thus would they find it to be less for their advantage, to increase the quantity of their land than to improve the quality, and that their own interest and prosperity were inseparably connected with the interest and happiness of their people. The most certain way of enriching a landlord's estate, and improving his fortune, is by filling the neighbourhood with industrious people, and furnishing them with employment. But, although a public work, such as this above alluded to, might in some degree mitigate these evils of idleness and consequently of poverty, by creating constant occupation for the present unemployed population, it could not be expected entirely to remove these evils. It is, nevertheless, easy to conceive what a blessing it would be to the community, if an hundred of the people of this village could find constant work in a mill of this kind, at a shilling per day, which would amount to £30 a-week, or £1560 a-year. How great a circulation of money would this create! The industrious villagers might then convert the most barren lands into luxuriant potato fields, and the most useless, uncultivated spots into fruitful and beautiful gardens. An active landlord could not dispose of his money more profitably, or more certainly to produce *interest upon interest*; and what would enrich himself would also be equally profitable to his servants and dependants. All classes of the community might then find lucrative employment, and landlords would be under no temptation to let their houses to any but the most industrious, sober, and cleanly people. Lodging-houses for vagrants, and tippling-houses for drunkards, are the two greatest evils that have ever been inflicted on the peaceable, sober, and industrious inhabitants of this village. Whoever admits such depraved and worthless persons into their houses must, to a certain extent, connive at or share in their vices and profligacy, and it is the interest of all classes of the inhabitants to have such lodging

and tippling-houses utterly suppressed. Every landlord ought to make it a condition with his tenant, not to suffer any person of this description to harbour or lodge in his house or premises, under a heavy penalty.

As legal provision has been made in every parish for the support of its own poor; and as the law declares that any person who gives money or lodging, sets houses, or gives any relief to any beggar, *wanting a license*, is liable, by act of parliament, 1579, c. 74, to a fine of £5, Scots, for the use of the poor of the parish, for *every such offence*—and as giving alms to common beggars is an encouragement to idleness, and to vagrants of every description—it would be of unspeakable advantage to the peace and comfort of the community, as well as to *sorners and masterful beggars themselves*, who daily oppress and harass the inhabitants, if this law of the land were strictly observed, and if the *trade of public begging* were completely suppressed, because all such persons would then feel the necessity of having recourse to honest industry, instead of living by idleness, fraud, and dishonesty.

*Of the Dairy.*—As the dairy is a branch of rural economy in this parish by means of which most of the tenantry are enabled to pay their rents, it deservedly occupies no small share of their attention. The dairy is by many considered the most eligible mode of rendering the land most productive. It is admirably calculated for enriching an inferior soil; is attended with very little risk; and it never fails to produce ready money. From the improved method of feeding the milch cows, it also furnishes an abundant supply of valuable manure, which constitutes the very life of all agricultural improvements, especially where the land is kept so much under the plough. Without the dairy, the land, in this district, would yield a very diminished produce and diminished rent. How low soever may be the price of dairy-produce, it is regularly paid; and, whatever the labouring classes may imagine, there can be little doubt that, if it were always such as to remunerate the cultivators, this circumstance would tend not only to promote the progress of industry, but would also, in an eminent degree, contribute to their own comfort and independence. Experience has shewn us that, while the prices of agricultural produce are extremely depressed, the tenants and occupiers of land do not possess the means of carrying on their improvements; and, consequently, they cannot afford full employment to the labouring population. Most of the practical farmers in this neighbourhood, from the system they have adopted, seem to be satisfied that the dairy is the most profitable way of turning their cold pasture-lands to the best account; and that a greater profit can be obtained by keeping milch cows—especially within eighteen or twenty miles of the metropolis—than by rearing or fattening cattle or sheep. Several reasons have been assigned for this opinion. It has been alleged that the produce of the dairy is never equal to the demand; that the market is less fluctuating; that a greater quantity of rich manure is obtained; and, above all, that the dairy-farmer has little or no occasion to spend his time and his money by attending country markets, as the greatest part of the produce of his farm is thus consumed at home.

On the proper feeding and management of the cows in a great measure depends the success of the undertaking; and to know, there-

fore, how to obtain the greatest possible quantity of butter or cheese from the milk is essential to the prosperity of every dairy-farmer. In the best dairies, it is the practice to allow the milk to stand, after milking, in wooden or other vessels, till it thickens and becomes a little acid, which commonly requires about thirty-six or forty-eight hours, in summer—according to the state of the weather—but longer in winter, unless in a warm place. It should never be put into the churn till the churning is to commence, lest it give the butter a disagreeable taste. The time occupied, when churned by machinery, is about two hours—being rather less than the usual time of the plunge-churn. By the constant, rapid, and regular operation of the machinery, it is supposed that a greater quantity of butter is thus obtained than by the usual slow method practised, in the old way, by the common churn. To proprietors of dairies which are, perhaps, fifteen or twenty miles from the metropolis, and who are accustomed to send the produce of their dairies to town, it may be of some consequence to ascertain whether the dairy may not yield as great a profit in cheese as it would do in butter. The produce of the cows can be manufactured in various ways, as may best suit the nature and situation of the farm. Either the *whole milk* may be made into *butter*, or the whole milk into *cheese*; or the *cream* only into *butter*, and the *skimmed-milk* into *cheese*. Some pastures, it is said, yield more butter, and others more cheese; but, in general, the profits from each of these modes of management are nearly the same, if properly understood and attended to. It has been found, that 10 Scots pints of new milk, or the cream taken off them, should generally produce 1 lb. or 22 oz. of butter, or 3 lbs. each 22 oz., of new milk cheese. Allowing 22 oz. of butter, at 1s. 3d., with 9 pints of butter-milk, at 1d., the produce will amount to 2s. If the same quantity, 10 pints, produce 3 lbs. of full milk cheese, sufficiently dry for the market, at 7d. per lb., and valuing the whey at 3d., the value will be the same. But, if the cream of the 10 pints yield 22 ozs., at 1s. 3d., and the milk 2 lbs. skim-milk cheese, at 3½d., making 7d., with two pints butter-milk, and 5 pints of weak whey, worth 3d., this will amount to 2s. 1d. The value of the produce, in either way, seems to be much the same; but it must vary considerably according to the prices of the butter and cheese, at the time of the sale, in the market, as well as the skill and minute attention bestowed in the management. All the dairies in this parish are within reach of the metropolis, where the produce can be readily disposed of.

It is well known that the milk of one cow is not only more abundant but also richer than that of another—even although they may be of the same size and of the same stock; and that both the quantity and the richness of the milk depend very much on the quality of the food, and on the variety and the regularity with which it is given them; and, in some degree, also, upon the proper mode of milking, and the ease and quiet which the cows may enjoy. Five Scots pints a-day may be considered as a fair allowance for a good cow throughout the season; and, supposing a cow to give that quantity per day, at an average, for 9 months, or to give 1370 pints a-year, and calculating every 10 pints to yield 22 oz. of butter, or 137 lbs. per annum, at 1s. 3d., the produce will amount to £8 : 11 : 1, besides the butter-milk; or the skim-milk cheese, and whey, for feeding pigs, which may be estimated to

nearly one-half more. The whole produce of a *first-rate cow*, exclusive of accidents, and on very *rich feeding*, will amount to nearly £13 per annum ; but, in ordinary dairies, at an average through the year, the produce may be calculated at little more than one half. No value has been put upon the calf ; but this, together with the manure, may be estimated equivalent to the care and trouble bestowed upon the cow.

*Of butter and cheese.*—In curing butter for the market, 10 oz. of fine salt is sufficient for every imperial stone ; and it should be thoroughly mixed with the butter, else it will soon become rancid in the taste and marbled in the colour. A small portion of saltpetre is sometimes used ; but this is not necessary. When the kit or jar is full, a handful of salt should be shaken on the top, to keep it from moulding, and the kit or jar should always be closely covered.

In *cheese-making*, the curd, after being salted at the rate of half-an-ounce of salt to every English pound of cheese, is subjected to the pressure of the screw, about one hour. It is then taken out and put in a dry cloth, and reversed ; and, each time it is thus turned, it remains for 3 or 4 hours, till it be sufficiently pressed ; and, being then placed in an airy situation, and turned twice every twenty-four hours, for 8 or 10 days, it is afterwards laid on the shelf to dry, till ready for the market.

In a district where the dairy is so productive, few calves are fed for the butcher-market. Some of the farmers rear a few of them as successors to their aged stock, which is generally transferred to the Edinburgh cowfeeders. Calves for dairy purposes might be reared, at little expense, either upon hay-tea or butter-milk, if early accustomed to either of these substitutes. In some dairies, this mode of rearing has been adopted with complete success. Sometimes, skim-milk has been used, with turnips boiled to a jelly. Each of these substitutes must be given milk-warm ; and gradually increased, till the milk be withdrawn altogether. Oil cake, dissolved in warm water, has also been successfully used for this purpose. By either of these ways, the dairy-stock may be kept up at little expense, whilst the value of the milk saved will be very considerable.

*Of Feeding.*—In this district, cows are generally turned out to pasture about the beginning or middle of May ; and, as soon as the pasture begins to fail, in harvest, the deficiency is supplied by a feed of tares or red clover ; and, at a later period, by turnips or cabbages. In winter, the feeding is varied by giving turnips raw, or boiled and mixed up with draff or grains, together with a sufficient supply of hay or straw. Sometimes the feed consists of boiled turnips and bean-meal ; but the richer the quality of the feed, and the more it is varied, as has already been noticed, the more the milk is increased both in quantity and richness.

To prevent the flavour of the milk and butter from being injured by the turnip, the dairymaid sometimes boils 2 oz. of nitre in a quart of water ; and, when cold, adds a tablespoonful of the mixture to 10 or 12 quarts of milk from the cow. If the turnip be washed, or taken up when the weather is rainy, the disagreeable flavour of the milk and butter will be stronger ; but, if the food be varied with straw and hay, the taste will be little affected by it. It will suit the same purpose to

put a little nitre in the pail into which the cows are milked, or by adding  $\frac{1}{2}$  of boiling water to the milk, before it be poured into the dishes. There is another kind of food that is not attended with such objections. Boiled linseed, which may cost 1s. 8d. a Scotch peck, has been found sufficient to convert 45 Scotch pints of water, by boiling it down to 40, almost into a jelly. This food is strong, nourishing, and wholesome, and is much relished by cows. In some dairies, the cows are fed with green clover, in the house, during the day, but turned out, in summer, during the night, on a pasture-field. One acre of good grass, cut and carried, will supply as much food for the dairy-cows as four acres of ordinary pasture; but some feeders have objected to this practice, from the idea that exercise abroad is necessary for the animals' health, and that it also increases the quantity of the milk. By this mode of house-feeding, a greater quantity of manure is obtained; and the cattle are kept in better condition on a much smaller extent of ground. Tares are used as green food both for horses and cows, in almost every farm, to preserve a succession of succulent food between the first and second cutting of the hay and clover, or in case the last should fail, as not unfrequently happens in a dry season. Sometimes a winter species of tares is sown in autumn, and is intended to be used in the spring; but this crop is generally a failure, excepting on very fine land. The winter-feeding, in some dairies, consists of boiled turnip, mixed up with draff or grains, in the morning; draff, and a little bean-meal, or barley-dust, in the middle of the day; and the same in the evening as in the morning; and the cows are always allowed plenty of good straw or hay between these meals. Feeding with turnip and draff produces the greatest quantity of milk; and much bean-meal renders some cows liable to disorders. In all kinds of feeding, a little salt is of great advantage; and it ought always to be remembered that the dairy will not return anything like the profit above-mentioned unless everything connected with it, both in the feeding and management of the cattle and the milk, be strictly attended to, and kept in the most complete state of *cleanliness*. To ensure success, the pasture, in summer, must not only be sufficient, but abundant, as *overstocking* is a most ruinous evil.

In every farming establishment, *the mode of feeding cattle and horses* requires the most minute attention; and, when fodder is scarce, and, consequently, dear, various unusual articles of food may be substituted—such as whins or furze, heathertops, and even branches of trees. The furzetops are either bruised by mallets or passed between coarsely-fluted rollers, worked by a wheel, or by a machine like a bark-mill, till reduced to a soft mass; after which, they are mixed with a small quantity of cut hay or straw. Several gentlemen, in Wales, for many years reared large studs of young horses, whose only winter food was the clippings of their extensive gorse or whin-covers. It was lately stated, in the newspapers, that a gentleman near Birmingham had been very successful in feeding 100 cows in this way, for supplying milk for the town. His land being of a poor, light, dry quality, he sowed 100 acres with furze-seed; and, before the plant rises into a shrub, he mows it; and, after bruising it in a mill, he mixes it with a portion of chaff, hay, or straw, or with grains or draff. But the furze forms the greatest portion of the dairy-food, and both increases the



quantity and improves the quality of the milk ; and thus forms a most useful and healthy article of food. This person, also, has adopted an unusual system, which he finds very profitable. He buys his dairy-stock a fortnight after they have calved—places them in pens, from which they are never afterwards allowed to stir from their stalls, till they are fat, which is usually at the end of five years. During all that time, they are milked, although they have no calves ; and are not allowed to go dry till near the end of the five years ; and, as the milk decreases, the fat increases ; and by this means he loses less of the use of the cow and makes more profit than he could do by any other mode of management. The same plan of feeding and milking has long been practised, to a certain extent, by the Edinburgh cowfeeders, and with equal success.

With the same kind of provender, Mr Johnstone of Hillhouse, in the adjoining parish of Kirknewton, fed his work-horses, for many years, during winter. The produce of an acre was said to be sufficient for six horses for four months. The furze required two years to reproduce ; and he found that one feed of oats and furze kept his horses in as good condition as with two feeds and straw ; so that one feed and the straw were thus saved. It is the usual practice now, in some stables, and it is daily becoming more general, to bruise the oats, and mix them with cut-straw, or chaff, or hay. In this way, the saving is very considerable, the horses are more healthy, and always appear in a better condition.

Another mode of feeding horses and cattle has lately been tried with inferior barley. Two parts of water and one of barley are put on to boil slowly ; and, after being boiled, are allowed to remain in the vessel, closely covered, 48 hours, when they are taken out to cool. All the water will then be absorbed ; and every corn will have burst, and be in a state of jelly. The barley is then mixed up with chaff ; and, when accompanied with hay or straw to the cattle, it assists rumination. One feed a-day, of this kind, may be given to work-horses also, with great advantage, and at a very trifling expense.

Among other suggestions for economising food, hay made of heath or heather has sometimes been resorted to in times of extreme scarcity. If a piece of heath be preserved or enclosed, and the heather or ling burnt, it will be ready for cutting with the scythe when it is two years old. Food of this kind for cattle is by no means uncommon in Sweden. Some years ago, a mason in Lanarkshire—residing near an enclosure of Scotch fir recently planted among heather, which had grown luxuriantly—being much in want of winter food for his cows during a year of scarcity, was wont to go out every day, and top the heather with a hook, and give it to his cattle. They eat it freely, and continued in as good condition as any cattle in the neighbourhood. In moorland districts, rushes, and such other coarse herbage as grows in mossy places, are sometimes mown, when tender, and laid up for winter provender ; and when the storm comes on, this kind of food is given to the sheep on some sheltered spot. In times of great scarcity, the small branches and leaves of trees, and tops of firs, have been used in winter, when no other food could be obtained. But of whatever kind the food may be, economy may be effected by a judicious mode of applying it. This consists chiefly in the regularity of feeding, and in the care of selecting

it ; and, as an inducement to feed well, it ought never to be forgotten that horses and cattle, in good condition, will be kept so, with little more than half the food they would require to recover them when once they have been allowed to fall off ; and that cows previously well-fed, will produce more milk, and of better quality, during a season, than two equally good, if ill-fed and ill-treated ; and, in like manner, the beef of a well-fed animal is superior to that of a half-fatted, half-starved one.

For general purposes of winter feeding either for horses, or cattle, or for animals of every description about a farm, nothing, as far as our present experience extends, can be placed in competition with the carrot or parsnip. Carrots, however, are a precarious crop, even in the best soils ; but, when they do succeed, one acre, well planted, will fatten a greater number of sheep and bullocks, than three acres of the best turnips ; and, at same time, their flesh will be firmer and better tasted. On this root, also, hogs and sheep fatten with wonderful rapidity. Every farmer, therefore, who has a stock of such animals, should strive to have a good store of these roots. The carrot may be cultivated anywhere but on shallow soils or on stiff clays, unless well under-drained and richly manured, with abundance of compost, of rotten dung, and fat sand. Its favourite soil is deep, sandy loam, or black, rotten earth. These roots are supposed to thrive best under drill culture, and the sowing ought not be delayed beyond the month of March, or first week of April, unless for a succession of crops, in which case they are sown in July, for an autumnal crop, or in the middle of August, if intended to stand for spring feeding. Some agriculturists dibble the seed to a considerable depth, and maintain that, from this practice, they have experienced no inconvenience. To ensure a good crop, gardeners sometimes use a mixture of rich virgin mould or loam, mixed up with a large quantity of dung, often turned over and nearly reduced to earth ; and, by taking a large dibble fifteen inches round, they make holes at twelve inches apart, which they fill up with this compost, and on each of these they sow a patch of seed, and afterwards thin out the plants as occasion requires. It is said that coal or wood ashes make an excellent seed-bed for these roots, and are a sure preventive from the attack of the worm or maggot. Some gardeners use coal dust, pounded very fine, for the seed-bed, and sow in drills ; and, by using this dust, they allege that they never fail to secure a full crop. Pounded ashes have also been used in sowing turnip seed ; and, it has been confidently asserted, that the ravages of the turnip fly or clock, may be overcome by sowing a double quantity of turnip seed, especially if the half of it has been sprinkled with water, and often turned for a few days previous to sowing. After being in a damp state for some days, the seed should be dried with fine pounded coal or wood ashes. The seed that springs first is devoured by the fly or beetle, and that which is later escapes its ravages.

In cultivating field carrot or parsnips, the ground should be ploughed as deep as attainable, in the beginning of October, and enriched with a large quantity of good rotten dung. Another ploughing may be given in February, and the third in March, when the seed is sown ; but in Suffolk, where this crop is extensively cultivated and where the land

is of a loamy, sandy quality, it receives no preparation till the period of sowing. From five to eight lbs. of seed, mixed with a bushel of pounded ashes or coal dust, is sufficient for an acre. Carrots, when a full crop, are the richest and most valuable of all others. Dr Hunter states, in his *Georgical Essays*, that in 1773 he attempted to make ale from carrots; but, although it worked kindly, it proved to be of a thick, muddy appearance, and he afterwards reduced it to spirit. From a gross calculation, he supposed that an acre of these roots, manufactured in this manner, would leave a profit of £40, after deducting the rent, cultivation, and all other expenses, by calculating the spirits to be worth 6s. per gallon, and not excised. From this experiment may be inferred the richness and value of such a crop, and its tendency to fatten all kinds of domestic animals.

*Of the sheep and its diseases.*—The different kinds and qualities of this useful animal have been already noticed; but as the most elevated district of this parish abounds in sheep, it will not be deemed altogether out of place here to mention a few of their numerous and most common diseases, which are in general but little attended to, in consequence of which great numbers die annually, that might otherwise be saved by a skilful shepherd, if he could be induced to apply the proper remedies and treatment. As prevention is better than cure, it may be observed that when sheep are brought from a very poor to a very rich pasture, the transition is attended with considerable risk of the animals being *blown*; and as they are apt to suffocate, they ought, therefore, to be kept gently moving up and down for a short time, to prevent them feeding too rapidly.

*The scab or mange* is one of the worst and most common diseases to which this animal is liable, as it affects both the wool and the flesh. It is, moreover, very infectious, and is produced by insects of a minute description, that settle on the portions of the flesh most susceptible of attack, and chiefly on those sheep that are either emaciated with hunger, or reduced to poverty by ill-treatment. It is sometimes also occasioned by permitting the flock to range over the same pastures where diseased sheep have been feeding, by which they come in contact with such things as the diseased animals have rubbed against, and, by this means, they never fail to catch the infection. Although, for a time, the sheep may appear to suffer but little, yet they never thrive much till cured of this malady; and hence it is necessary, before locating the flock upon a new field, to examine the state of the pasture. For the cure of this disease, it is requisite to apply the common mercurial ointment, in such a manner as to suit the different stages of the disease. For those cases that are most inveterate, the ointment must be composed of one-fourth of Trooper's ointment, and three-fourths of common lard; and, for ordinary purposes, there should be five parts of lard to one of mercurial ointment. The mode of application should be from head to tail, in a line close to the skin, well rubbed in on either side, in lines not more than three or four inches asunder. This ointment is valuable for destroying vermin on cattle or swine, as well as sheep, and is equally effectual for curing sore heads caused by the fly and for destroying maggots; and may be had, ready-made, at all the druggists. A still simpler cure, is a table-spoonful of spirit of tar to a common bottle of tobacco juice, which

may be poured on the skin of the animal through a quill fixed in the cork of the bottle.

*Foot-rot* is also a most troublesome disease, and to cure it is very difficult; it is also supposed to be infectious. Put the sheep in a dry field; pare the hoof as far as it has any dirt or fester under it, and apply to the parts affected, with a wooden skiver or feather, butter of antimony, and let the sheep remain an hour or two in the fold; or, apply paste, made of equal quantities of blue vitriol, gunpowder, and train oil. Or, the foot may be well washed with soap and urine, then bathed with turpentine, or powdered quick lime may be applied, and it should afterwards be rubbed all over with tar, and bound with flannel; and if the animal be turned into a clean, dry pasture, the cure is certain.\* At the expiration of a week they should be again examined.

The *feet halt* is occasioned by a worm two or three inches long. Move the claws, in a contrary direction, backwards and forwards, till the worm makes its way to the surface.

*The rot*.—Mr Bakewell attributes this disease, which is so fatal to sheep, solely to flooded lands, and the unsubstantial herbage afforded them. A flooded soil he found inevitably rotted the sheep that were fed on it during the ensuing autumn. All rank, foul feeding has a tendency to produce this disease; but, whilst the ewes continue to suckle the lambs, they are seldom liable to this complaint. Sheep will eat parsley with great avidity, which imparts a peculiarly delicate flavour to their flesh, and is found very serviceable to such animals as are scabby, dropsical, or disposed to the rot. In the cure of such diseases abundance of pure water, and occasionally giving them salt, is of great advantage. Salt is considered to be a great preventive of the rot, and is admirably calculated to promote the general health. To fatten sheep affected with the rot, it is usual to feed with horse beans in troughs, or out of pods in pens under cover, with hayracks, and water constantly kept by them. This food often cures them, if, at same time, the skin under the belly be opened with a penknife or lancet, to let out the water between the flesh and the skin. To prevent this disease, the sheep, in summer, should not be unfolded till after sunrise, or about seven or eight o'clock; and when unfolded, they should then be driven briskly about, before and after leaving the fold. Salt, particularly, is of great benefit to sheep, as well as to most other animals. In Holland, where salt is not used for sheep, the want of it is compensated by the numerous alder trees, the branches of which they eat greedily in wet weather, and when they are suffered to pasture on marshy ground. In most other parts of the continent, they give salt, particularly in rainy and damp weather. This is likewise considered a cure for *the dropsy*, to which sheep are also very liable.

*The sturdy* is a disease occasioned by a collection of water in the brain, which is cured by thrusting a sharp wire towards the centre of the brain, above the eye, or up through the nostrils, and bringing the water out at the nose. The injury thus done to the brain is not fatal to the animal; for it is a fact well known, that the brain may be pierced without any fatal consequences. The writer, in the presence of medical men, has seen a wire forced through the brain of a chicken,

without producing any injurious effects, although the wire remained in its head for several months.

*The braxy* is cured by feeding on turnips, which, from their purgative nature, both cure and prevent this disease. Change of pasture and succulent food, with quiet and careful herding, are also not the least efficacious of preventatives.

*The tick*, a blood-sucking animal, is cured by a mercurial preparation, or one made up with arsenic, or even with a decoction made from tobacco, or the common broom, which will kill these vermin when on the skin. Anointing the bare part of the thigh with mercurial ointment, will prevent the ticks from attacking the lambs. To defend the sheep from the fly, a powder, composed of white lead and white arsenic, must be shaken on with an old pepper-box, or through a thin gauze or muslin cloth. This kind of powder may be had, ready prepared, of any druggist.

To prevent the many distempers to which young sheep are exposed, nothing is better calculated than bringing them to the low grounds, and sheltering and feeding them with turnips; and even a few turnips given occasionally, during the first winter especially, will be of the greatest benefit. Turnips and oats, for old *wethers*, make the finest flavoured mutton. If a range of simple sheds could be erected near the side of the straw yard or dunghill, to which the sheep, in the low grounds, could be collected every stormy night in winter, it would save the trouble and expense of tarring, and the wool would give a higher price; and if, in these temporary sheds, there could be sprinkled a little fine mould or dry moss, or a little straw or ferns, a great deal of most excellent manure might be thus obtained, as a compensation for the additional expense thereby incurred; and it is well known that sheltering them in this manner would protect them from a great many distempers, to which outliers are necessarily exposed. The superior condition of the sheep, the value of the manure, and the increased value of the early lambs, would amply repay the extra trouble which this mode of management will necessarily require.

*Of Horses.*—The proper management of this most useful and noble animal, is so well understood that any lengthened detail on this subject is quite unnecessary. It is always a matter of no small importance to obtain those that are of a proper breed and form; and, by feeding them well, they will be enabled to do more work than others of an inferior kind, and will be found most profitable to the master in the end. It is now admitted, on all hands, that the stable should be properly *ventilated*, as a sufficient portion of fresh air is essentially necessary for health, prevents sudden colds, and many other diseases. It is only of late that this circumstance has met with the attention it deserves. The most improved rack is now placed on a level with the present manger, with its bottom six inches both from the wall and from the ground, to prevent the animal from pulling out the whole hay or straw, to reach the seed or the oat pickles; or, as in some stables there is now no rack whatever, as all the hay and straw is cut and given in the manger, after being mixed with oats, or with thin sliced turnips or potatoes, bars being fixed across the manger to prevent the animal from throwing them out. Straw-cutters, where many horses are kept, are a great saving of hay or straw, and the bruising of the oats and beans which is gener-

ally done by rollers attached to the thrashing mill, renders this feeding richer and more generous, and is of great benefit to the horse, as well as a saving to the master. Thirty lb. of turnips thus mixed with straw or oats, with a little barley dust, make a good feed for supper ; and four lb. of bruised oats, one lb. bruised beans, and six lb. of straw or hay, make an excellent mixture ; and half an acre of good turnips will be a fair allowance for four horses during five or six months. Where turnips or potatoes cannot be obtained, the oats and beans and cut hay and straw must be doubled. Nothing contributes more effectually to produce the distempers to which the horse is liable, than an *ill-ventilated, dark, and dirty stable*, violent and oppressive exertion, and long fasting. Regular feeding, the habitual and diligent use of the curry-comb and brush, and a moderate portion of water, at proper intervals, will contribute, in no small degree, to prevent many distempers.

*Swine.*—These animals may be rendered a profitable concern in every farm, if properly fed and cared for. It is of great use to sow carrots, parsnips, and turnips, not only for family use, but also for hogs. Young growing pigs also thrive well upon young grass and clover, and much of their food is what other beasts cannot use, such as dish-washings, whey, skim-milk, and all kinds of offals. If allowed to go at large, it is necessary to ring them, else they will destroy more than they eat. They fatten very soon on carrots, pease, or beans. Some farmers keep one pig for every cow, and one breeder for eight or nine. In the feeding of animals of every kind, as has been already mentioned, salt, occasionally, is an important ingredient. For bacon hogs the large varieties, doubtless, are the most profitable, as endowed with the important qualification of *growth* as well as fat. Growing stores and sows are fed, through the winter, with the run of the barn-yard, and upon roots of all kinds, with perhaps a ration of corn or meal of any kind ; and the fewer together, the more equally and speedily they fatten ; but milk-fed pork is always the best, and in flavour the most delicate.

## NOTES

WHICH OUGHT TO HAVE BEEN PREVIOUSLY INSERTED.

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### PAGE 6.

*The Asteroids*, which lately appeared in the south of England, fully corroborate what has been stated regarding the *falling or shooting stars*, in the foregoing pages, under the head of *Meteorology*. One of the most splendid specimens of this meteoric phenomenon that has ever been seen by the inhabitants of Great Britain, was observed in and about London on the morning of the 14th of November 1838, at an early hour. Such was the alarming appearance of conflagration which it produced, that several fire-brigade engines were turned out, and, for two hours, were traversing the streets in search of the supposed fire; and some of them proceeded as far as Hampstead before the mistake was discovered. Parties, also, of the metropolitan police, and those belonging to the Insurance Societies, were running about in all directions, to discover where the fire was. The time when these meteoric phenomena have been observed during the last six or seven years, has been from the 12th to the 16th of November. The same phenomena has appeared precisely at the same time on the Continent of Europe, and in Australasia and America. During its progress in the Metropolis the stars shone with peculiar brightness, and the first object which attracted the notice of the observer, was several stars shooting from their places, and falling apparently to the earth, when they seemed to explode. This phenomenon began before two o'clock in the morning; towards four, it became very faint; and in about half an hour, the bright columns of light radiating from it totally disappeared. The whole of the city was illuminated, and also the country. In Siberia there is another kind of these atmospheric phenomena, which crackle, sparkle, hiss, and make a whistling noise, like the firing of a rocket, when every animal is struck with terror, and the dogs of the hunters fall to the ground, and become immovable till it is over. It does not appear that this wonderful phenomenon has been observed in Scotland on this occasion, owing, perhaps, to the atmosphere being cloudy on the morning of the 14th, when it made so brilliant an appearance in the Metropolis.

### PAGE 16.

It may be observed, that the various insects, and other animals which prey upon fruit and vegetables, are often more numerous and destructive during one year than another. Last season was remarkable for the destruction of cabbages and other vegetables, occasioned by a small greyish snail, which defied every attempt to prevent its ravages. The most successful method discovered for the destruction of this enemy of the vegetable tribes was, to lay cabbage leaves, or small heaps of hulk or bean chaff, along the ground, under which the snails take shelter; and, on removing the hulk, they can be effectually destroyed by hot lime water. It has been alleged by some naturalists, that those insects which are peculiar to blighted vegetables, do not propagate their kind, and that no seed of them ever survives the winter; that the earth is by no means its proper *nidus*; and that, invariably, those insects may be traced to the blighted state of the atmosphere. Assuredly, seeds of various species seem to pervade all bodies in Nature, solid as well as fluid. There are many insects, the pedigree of which we cannot trace, and some of which invariably follow animal or vegetable putridity. Lichens and mosses are also fostered by stagnant moisture or vapour; and it is not unreasonable to suppose, that their seeds are naturally inherent in the bodies themselves, from which they are produced. A delicate plant, from a warm room or hothouse, when exposed to the blighting wind of the atmosphere, will immediately catch cold, as will speedily be indicated by the *curl of the leaf*; and how healthy soever it may have been previous to its exposure, if examined twelve hours after, the leaves and stalk will be affected with a mould, and in forty-eight hours more, the insects natural to the plant will be discovered. In like manner, animal-culæ follow the corruption of the fluids in the animal body. In such cases it is impossible to conceive that the ova or eggs of insects can have been obtained from without.

After a blighting wind, in spring, the leaves of tender and delicate plants—both of fruit-trees and vegetables—are often affected by the *curl*, and assume a shrivelled appearance. In a short time, white spots become visible, which soon degenerate into blue mould or *mucor*; and, in three or four days, the *mucor* becomes animated, in the form of those *pediculi* which are proper to the *genus brassica*, or cabbage in its morbid state. To this cause, probably, the *curl in the potato* may be traced; since the soundest seed, in consequence of a blighting wind, may produce this disease. Plants only which are affected by the chilling winds, suffer any blight or produce any insects; and it clearly appears that the corruption of stagnant juices is necessary for their production. If the *ova* of these insects, therefore, be inherent in the plants themselves, and the atmospheric blight be a part of the process necessary to animate them, then, to prevent them propagating, it must be the object of the agriculturist to produce the most healthy and vigorous plants, and to raise the temperature of his turnip-field—by means of shelter, draining, good culture, and manure—to such a pitch as to counteract the effects of the *frosty, blighting wind*. There are many other insects and animalculæ for whose origin it is more difficult to account. In the meeting of the Royal Institution, Professor Faraday delivered a lecture, in which he alluded to the late discoveries of Mr Crosse, with respect to the formation or revivification of insects in flint, which, although doubted, he knew to be true, inasmuch as, by a continuous voltaic stream from *silica of potass*, he had himself produced living animalculæ. He also exhibited some insects obtained from *hard polished stone*, which were now, like those of Mr Crosse, enjoying life after a transition of thousands of years. Mr Children has also repeated these experiments; but from insects of this kind the agriculturist has nothing to apprehend. Certain it is, however, that those fields which have the advantage of a rich, deep mould, and which are least exposed to the *chilling* winds, will always be found the least liable to the depredations of the turnip fly.

## PAGE 33.

The writer has lately caused another search to be made within the Roman Camp, at Castle Greig, but no additional coins could be found in the well in which the great flag-staff had stood. The workmen were prevented, by water, from getting down any further than seven feet; but, on probing the bottom of the well, some hard substance, like stones or pavement, were felt, about two feet below. Several other places were examined about the outskirts of the camp, but nothing was discovered, except some ashes, seemingly of coal. In casting a ditch, several years ago, some labourers found a great many Roman coins, about a mile and a half to the west of this camp, near Crosswood Burn, in the border of the adjoining parish of West Calder. These coins came into the possession of the late Mr Steel, the proprietor of Crosswood Hill, who, according to report, presented them to the Antiquarian Society in Edinburgh.

## PAGE 34.

It must be peculiarly gratifying to every Presbyterian to learn that our illustrious countryman, Sir David Wilkie, is at present occupied in executing an historical painting of the great Reformer, John Knox, administering the Sacrament of the Lord's Supper—according to the Presbyterian form, for the first time immediately after the Reformation—in the great hall, now the drawingroom, of Calder House. This is a noble subject for the pencil of this eminent artist; who, no doubt, will make a fine picture of it, as may be anticipated from his admirable painting of the preaching of Knox before the Lords of the Congregation, for which it is understood this is intended as a companion. Among the Lords of the Congregation present at this dispensation of the sacrament at Calder House, it is supposed were the Lord Marr, the Lord Lorn, Erskine of Dun, Regent Morton, and the first Lord Torphichen, the chief of this noble family, who was the particular friend and protector of Knox; together with the domestics, and other parishioners.



## PAGE 44.

To shew the extent to which the manufacture of grain is carried on in this Parish, it might have been noticed that the miller of West Mill of Calder has manufactured, at an average, during the four years ending at Martinmas last, 4546 quarters of oats and 1207 quarters of barley, chiefly for the Glasgow market. The machinery of this mill is of the newest and most improved construction, and thoroughly clears the grain of stones or gravel, and of all other impurities, before it is ground, which cannot fail to render the meal superior in quality to that which is made by inferior machinery. It appears that Camilty Mill, the property of Alexander Young, Esq., which has been formerly mentioned as being in complete repair, is also, at present, in full operation, and has more work on hand than it can accomplish; and now, since the roads to this mill are in excellent condition, it bids fair to secure a share in the meal trade, as its distance from Glasgow is little more than a mile further than that of West Mill, where the manufacture of grain is carried on to so great an extent.

## PAGE 71.

It has formerly been remarked, that no individual who was either proprietor or tenant, at the time when the present incumbent was admitted in 1795, is now either proprietor or tenant in this parish; and, it may here be stated as a singular fact, that James Fleming, the tenant in Blackhall, on the estate of Linhouse, now Burubrne, the property of Mrs Hay Primrose, in this parish, is the lineal descendant of the same family that has been in the possession of this farm since 1518, which is no less than 320 years. In corroboration of this fact, besides the family tradition, and some ancient records, the names of some of his ancestors are to be found in the lists of those who attended the Wappenschaws with horse and armour, in ancient times.

THE END.

